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P18379-001

SENT VIA EMAIL

Mr. Joe Turner, Land Use Hearings Officer
c/o Dept. Land Use & Transp, Washington Co.
Public Services Building
155 N. First Ave, Suite 350, MS. #350-13
Hillsboro, OR 97124

Re: Brown Contracting Contractor Establishment Application
County Casefile L2400001-D(IND)
Third Open Record Period (Rebuttal) Submission.

Dear Mr. Turner,

This letter and its accompanying exhibits constitute the applicant's third open record period submittal, and is intended to provide argument and evidence in rebuttal to submittals from opponents and exaction demands sought by the City of Wilsonville. We have attached the following exhibits:

Exhibit 27: Discussion of Noise Citation issued by Deputy Kibble on December 19, 2022.
Exhibit 28: June 9, 2024 Letter from Kerrie G. Standlee, P.E., DSA Acoustical Engineers, Inc.
Exhibit 29: June 7, 2024 Memorandum from Melissa Webb, P.E., Lancaster Mobley.
Exhibit 30: Exhibit clarifying the scope of the protective order in 22 CV 23711.
Exhibit 31: Exhibits related to unlawful drone usage by Eric McClendon.
Exhibit 32: Images of the pedestrian path at issue in *Dolan v. City of Tigard*.
Exhibit 33: Article providing background on the case of *Sheetz v. County of El Dorado*.
Exhibit 34: Tax Assessor's Map showing the property at issue in *Art Piculell Group v. Clackamas County.*
Exhibit 35: Exhibits providing background on *McClure v. City of Springfield*.
Exhibit 36: Tax Assessor's Map and photographs issue in *Hallmark inns and Resorts, Inc. v, City of Lake Oswego*.
Exhibit 37: Google Earth Pro screenshot showing distance from fuel tank to property line.
Exhibit 38: Ground Vibration study conducted in 2015 that led to a LUBA case entitled *Jacobs v. Clackamas County*.
Exhibit 39: Declaration of Don Brown dated June 10, 2024
Exhibit 40: Delta Logistics Annex, Traffic Impact Analysis, DKS, Feb. 2022.
Exhibit 41: Aerial Images
Exhibit 42: Footage of Brown Contracting Grounds on May 22, 2024 at around 4:40 AM

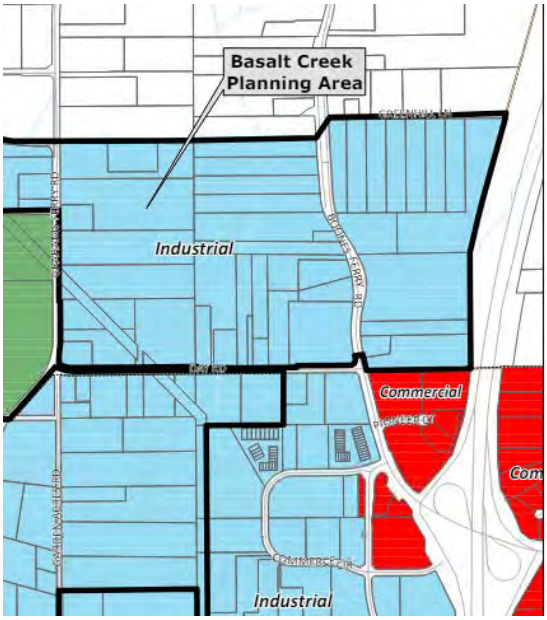
I. Misconceptions about the FD-20 Zone.

Brown Contracting operates from an office located at 9675 SW Day Road, Sherwood OR 97140. Brown Contracting's property is located within the "Future Development 20" (FD-20) land use district. Some of the opponents have commented that a contractor establishment is not compatible with the FD-20 zone. These opponents opine that the FD-20 zone is a "residential zone." It is not. The FD-20 zoning district is an interim designation (*i.e*. a "holding zone") which is employed to maintain the status quo with regard to development until a master plan for urban development is complete. The zone allows low-impact transitory uses such as contractor establishments as a special use. The zoning anticipates that landowners will eventually annex their property to the City of Wilsonville, consistent with the Basalt Creek Concept Plan's jurisdictional boundary demarcation.

Eric McClendon's May 30, 2024 letter typifies the opponents' misunderstanding:

> FD-20 zoning is not conducive to industrial operations. The applicable FD-20 zoning, which allows only "limited interim uses until the urban comprehensive planning for future urban development of these areas is complete" (Cmty. Dev. Code § 308-1 (emphasis added)) does not permit unfettered or long-term land use and contemplates that non-residential uses will give way to expanding residential uses. Brown's expanding industrial operations conflict with the increasingly residential nature of the area, including the construction of a 400-home development ¼ of a mile north on SW Boones Ferry Rd. (Emphasis added).

Id. at p.6. The opposite is true: residential uses will be gradually phased out, in favor of industrial uses, over the next 10-20 years. As envisioned by the Basalt Creek Concept Plan, this area is slated for future industrial development inside the City of Wilsonville. The Basalt Creek Concept Plan shows the area as a "High Tech Employment District," which the plan describes as featuring a "mix of warehousing, manufacturing, and office buildings" creating almost 2000 jobs. This is discussed in my previous letter dated May 30, 2024 as well in submittals from the City of Wilsonville. *See* Exhibit 2 to letter from Andrew H. Stamp, dated May 30, 2024, at p. 31. As shown in the map to the right, the City of Wilsonville has already designed this land as "Industrial." *See* Wilsonville Ordinance 834 Exhibit A, which can be found at Exhibit 4 to Applicant's Letter dated May 30, 2024.



The good news for these opponents is that both they and Brown Contracting will be able to sell their land holdings by around year 2035-2045 to industrial developers, and likely make a tidy profit in the process.

II. Response to Opponent's Comment Letter Submitted on May 30, 2024.

A. Background.

As the Hearings Officer may recall from 2014-15, Brown Contracting is currently operating pursuant to a 2015 Washington County Land Use Permit issued by Hearings Officer Joe Turner. Case File 14-431-D(IND). The 2015 permit identifies the proposed use as a "contractor's establishment." This term is not defined in the Washington County Community Development Code. Brown Contracting's application narrative stated that the proposed use involved storage of equipment, trucks, trailers, heavy machinery, and construction equipment. *Id.* Brown Contracting also stated it would use the property for storage of material such as rock, gravel, piping, and concrete products. Washington County did not impose any special restrictions related to noise on Brown Contracting's activities. The staff report only makes a factual finding that all development shall comply with the Washington County Noise Ordinance ("WCNO").

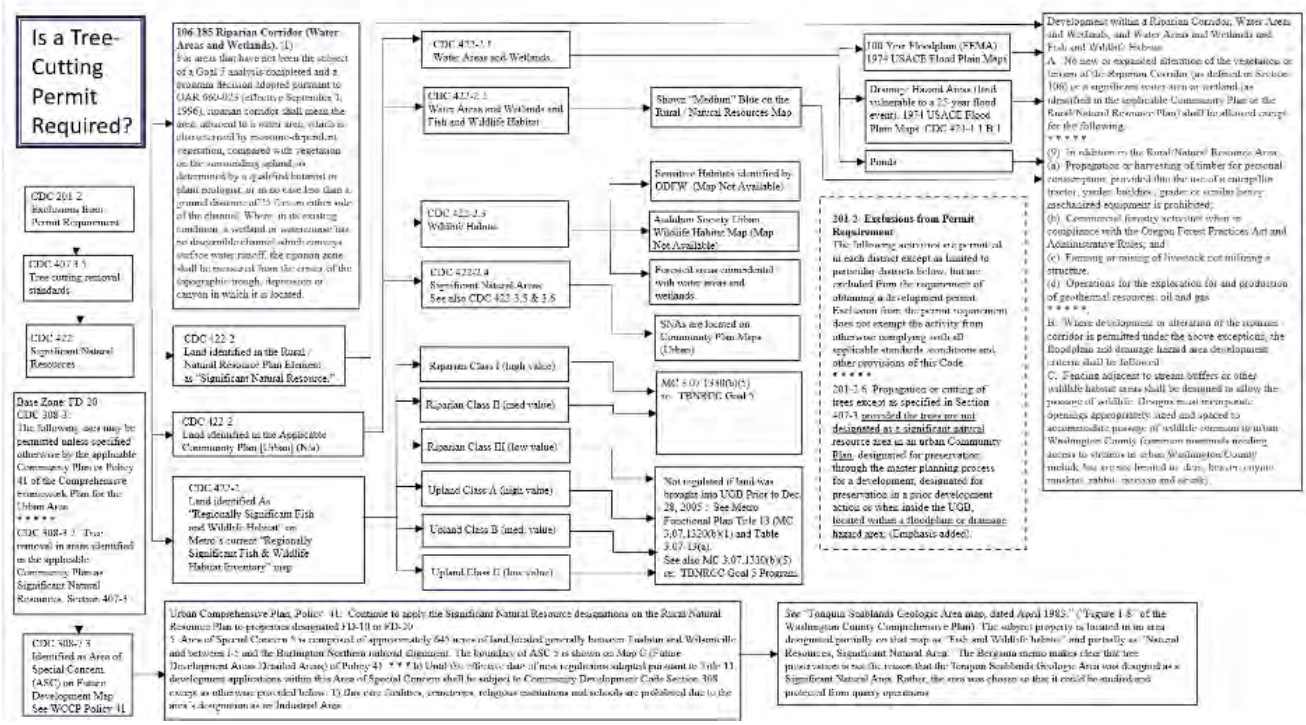
In or around March of 2019, Mr. Eric McClendon and his mother, Ms. Tina McClendon, purchased a home on the north side of the contractor's lot. This was four years after the county approved Brown Contracting's land use application. By that time, the scope of the contractor operations was in full view to the McClendons. Their pretend stance that they were not aware of Brown Contracting's activity from that time defies any notions as to their credibility.

The McClendon family obviously does not enjoy residing next to a contractor establishment. They probably should have bought a house in a purely residential neighborhood. However, wanting the best of both worlds, they have sought to bully Brown Contracting by filing numerous complaints concerning myriad issues, including zoning, wetlands, air quality, tree cutting, and noise violations. With the exception of the tree cutting issue, their allegations have all proven to be meritless. They also filed a lawsuit alleging common law nuisance, amongst other claims. That lawsuit was settled last month.

Brown Contracting did cut three acres (+/-) of wooded property without a permit, but they had specifically asked the county and were told no permit was needed, so they had no reason to suspect that a permit was, in fact, required. The reason that Brown Contracting turned out to need a tree-cutting permit was only due to Goal 5 issues, although it would be difficult for anyone without a "JD" or "AICP" behind their name to figure this out. A much more detailed explanation of the facts of that case is set forth in a letter from Andrew H., Stamp dated March 25, 2024, submitted into this record on June 3, 2024. It is probably not necessary for the Hearings Officer to understand the details of that case to resolve this case, but we included the information because the opponents use that case (County Casefile L2400019-TREE, a final decision that was not appealed) to unfairly cast dispersions on Brown Contracting.

Brown Contracting applied for an after-the-fact tree cutting permit, at great expense. Staff approved the permit with minor mitigation because the tree cutting contractor removed a small but undetermined number trees in a small triangle of land that *might* have been regulated as Class II "Riparian Habitat" on Metro's Regionally Significant Fish & Wildlife Habitat Inventory Map. *See* Photographs 1-2 set forth in Exhibit 24 to the letter from Andrew Stamp dated May 30, 2024 (Showing tiny mitigation area). As shown in these photographs, the applicant performed that mitigation.

The bottom line is that the tree-cutting issue was a proverbial nothing-burger. Nonetheless, the lack of understanding of the need to obtain a tree cutting permit can in part be attributed to the county's poorly drafted and needlessly complex tree-cutting laws. *See* Flow Chart at Exhibit 1 to the letter from Andrew H. Stamp dated March 25, 2024 (a copy of which is presented below in reduced scale). Even the City of Wilsonville Planning Director, who commented extensively on the tree-cutting permit, did not understand how the law works.



Beyond just these allegations, Mr. Eric McClendon submitted an undated letter into the record on May 30, 2024 in which he makes a number of incorrect factual and legal assertions. In this letter, we directly respond to those false allegations. We also respond to other opponent testimony received as of May 30, 2024.

B. Credibility of the Opponent Testimony.

At the outset, I must be frank in saying that the McClendon family (and to a somewhat lesser extent, Ms. Jackie Mathys) are some of the least credible witnesses I have ever had the opportunity to evaluate. I understand that an individual's home is very personal and can lead to great emotional attachment. Emotions can cloud a person's judgment and skew their perspective, leading to a tendency to exaggerate grievances. This is a case where the judgment and perspective of some of the opponents is clearly impaired. This is evidenced by the fact that the McClendon family in particular are prone to greatly exaggerate the scope of perceived problems, and they say things that can be disproven by objectively verifiable facts.

A series of examples bear this out. Mr. McClendon advocates for a 100-foot setback for the storage of fuel or chemicals. *See* Letter from Eric McClendon dated May 30, 2024 at p, 8. He complains that Brown Contracting "installed three 550-gallon fuel tanks near our fence line that are not addressed in either permit." The problem with that statement is that it is demonstrably false. The three tanks are located more than 350 feet from the fence line in question. *See* Exhibit 39 (Declaration of Mr. Don Brown dated June 10, 2024). Claiming that something located 350+ feet away from a fence is "near our fence line" is objectively misleading

and dishonest. Moreover, Brown Contracting worked with the Fire Marshal to get the tanks permitted to their specifications. *Id.*

As a second example, Mr. McClendon objects to the submission of the DSA noise study because he says it violates a "protective order." His only evidence of this alleged "protective order" is a *draft* that was not signed by the Circuit Court. We knew nothing about this alleged order. We verified with Brown Contracting's insurance defense counsel, Mr. Greg Reinert, that no protective order exists. Exhibit 31.[1] Thus, as with most everything Mr. McClendon says or does, he is wrong. I would be somewhat understanding if Mr. McClendon did not have formal legal training. After all, understanding the legal process can be intimating to someone not trained in the law. But Mr. McClendon states that he is a "licensed attorney," so he is subject to a higher standard of ethics and professionalism. To blatantly misrepresent the trial record in a case where he is the plaintiff seems to conflict with his ethical and professional obligations to the tribunal.[2]

Mr. McClendon notes, correctly, that "Brown logged * * * additional lots [*i.e.* TL 310, 311, 302] without the required [tree cutting permit] approval." But then he completely fabricates the next allegation when he states that "Brown immediately began developing these lots without the required approval." *See* Letter from Eric McClendon dated May 30, 2024 at p. 1. The second claim is simply untrue. We have submitted extensive documentation pertaining to the tree cutting permit issue into the record. *See* Letter from Andrew Stamp dated March 25, 2024, submitted on June 3, 2024. Mr. McClendon is simply mischaracterizing the record when he states that Brown "began developing" after logging. *Id*. We have submitted extensive photography and video into the record of this case, which conclusively shows that no "development" has occurred on TL 302, TL 310, or TL 311. *See* Exhibit 24 to Letter from Andrew Stamp dated May 30, 2024. Brown Contracting did engage in some *maintenance* of the existing driveway on TL 302 that serves a rental dwelling located on TL 310. The logging equipment chewed up the gravel driveway, so Brown Contracting repaired it. Brown Contracting also reseeded the land to prevent erosion. The county engineering staff conducted a site visit and determined that this activity did not constitute "grading" or "development." *See* Exhibit 13 to Letter from Andrew Stamp dated March 25, 2024. Why Mr. McClendon would seek to mischaracterize the record in such a blatant manner is unclear, but it provides further evidence that his word cannot be trusted.

In the tree-cutting case, the McClendon family managed to recruit eleven of their friends living throughout the Portland Metro region to write wildly inaccurate and vitriolic comments based on second-hand information. As one example, one delightful resident of NE Portland accused Brown Contracting of "illegal land clearing" and stated that "[n]o fine is large enough for this scumbag." Another person who lives a mile away from the subject property stated that

[1] Out of caution, we reached out to the McClendons' attorney, Randal Acker, via phone and email to independently confirm the facts, but he did not respond to multiple inquiries.

[2] If it turns out that Mr. McClendon is merely mistaken as to the status of the trial record, then I will gladly accept his written apology and retraction.

AKS should "not be allowed to work in the County" because they have "no regard for rules or laws or the people that live here." Of course, AKS had nothing to do with the tree cutting incident, but why let facts get in the way of a good story? Another person incorrectly stated that "AKS falsified wetland map data to assist Brown Contracting / Emick Investments." A resident of Southeast Wilsonville stated that removing a wetland is "short sighted at best, idiotic at worse [*sic*]." Of course, no wetland was impacted, let alone "removed." Another person who lives in Tigard asserted that Brown Contracting removed "old growth trees," which was not true. The trees were second or third growth, not old growth. Another person testified that "[w]e need to keep our urban green spaces" because "they are good for everyone," suggesting that Brown's contractor had cut trees on public property.

The question must be asked: how did so many people with no connection to the property make so many false and/or exaggerated claims? And why did none of those people comment on this Development Review application? The two common threads in these comments were that (1) they contained an unusual amount of anger and vitriol, and (2) all of the comments reflect a poor understanding of the facts and application of the law. The obvious link is the McClendons: they grossly misrepresented the nature of the facts to their friends in an attempt to rile up opposition and astroturf. To their credit, county staff saw through the ruse. As this example shows, the McClendons generally exhibit an unusually poor ability to recite factual information without exaggeration or hyperbole.

As a fifth example, Ms. Tina McClendon states on page 2 of her May 30, 2024 submittal that Brown Contracting engages in "power-washing cement trucks with the runoff going directly into the wetlands because they have no catch basins." This is a blatant fabrication. As an initial matter, Brown Contracting does not wash cement trucks on the property as a general practice. *See* Exhibit 39 (Declaration of Don Brown dated June 10, 2024). Second, a storm drainage system does in fact exist on the property. *See* Exhibit 1-4 to the Applicant's May 15, 2014 pre-hearing submittal. Third, the wetland is located at least 200 feet from the nearest point of pavement, and therefore it would be quite impossible for surface water to make its way down to the wetland over these well-drained Saum Silt Loam soils. As with most things that the McClendons say, the truth is a long distance from the allegation.

Another personal observation I have noticed that Mr. McClendon exhibits cognitive bias in which he wrongly overestimates his knowledge and ability in specific areas. In the field of psychology, this is known as the "Dunning-Kruger effect." This tends to occur because a person's lack of self-awareness prevents them from accurately assessing their own skills. As a prime example, Mr. McClendon attempts to conduct a "DIY" acoustics engineering study, in which he basically just discredits himself via multiple methodological errors. *See* Exhibit 28 (Letter from Kerrie Standlee, DSA, dated June 9, 2024, at p. 5-6) (discussing Mr. McClendon's errors). But he attempts to use the results of his own flawed "sampling" to discredit Brown's Contracting's professional engineer. Stunningly, Mr. McClendon states that his sampling "shows once again how biased Brown's 'study' was." Actually, the only thing his sampling shows is that: (1) Mr. McClendon has absolutely no understanding of acoustics engineering, and (2) he lacks the self-awareness to recognize his own lack of knowledge. He further accuses Brown's

"team of attorneys" of "scripting" the sound readings by running multiple "takes" until the desired readings were achieved. In truth, multiple "takes" were required, but this was because there were times when high amounts of ambient noise from aircraft and truck traffic on Day Road were ruining the data. *See* Exhibit 28 (Letter from Kerrie Standlee, DSA, dated June 9, 2024, at p. 4).

Mr. McClendon also exhibits signs of entitlement by failing to comply with state and federal drone laws. He admitted in litigation that he owns a drone and that he has flown drones over the subject property. *See* Exhibit 31. This activity was done in contravention of state and federal law. Mr. Clendon continues to trespass via his drone, despite having been put on notice of the illegality of his conduct. *Id.*

Mr. McClendon also lies when he states that Brown Contracting is the only landowner making "noise and light." Mr. McClendon has filed code violation complaints against the Amazon operation neighboring both his and Brown Contracting's properties as well (located on Tax Lot 300 of Washington County Assessor's Map 3S102B)[3]. There is no "berm" on the Amazon property that protects the McClendon from noise from that site. There is a berm on the northeast side of the Amazon lot, which the county required the landowner to install. But that berm does nothing to redirect noise away from the McClendon residence. We think that Mr. McClendon confuses the noise sources when he blames Brown Contracting for making all the noise.

Unfortunately, this is part of the reason it has been so difficult for Brown Contracting to work with the McClendons: they are hyperbolic, overly sensitive, unreasonable, and untrustworthy. Brown Contracting supplied and installed a sound wall that cost roughly $50,000.00. Mr. McClendon asked Mr. Brown to build this sound barrier fence. According to Mr. Brown, Mr. McClendon originally verbally agreed to pay half of that cost, but later reneged on that promise. Exhibit 39 (Declaration of Don Brown). Brown Contracting built it anyway, as a goodwill gesture. Brown Contracting's retained acoustics engineer, Mr. Kerrie Standlee of DSA Engineering, inspected the sound wall and recommended additional design modifications to make it more effective. In response, Brown Contracting spent an additional $6,000.00 to make those changes. Mr. McClendon now positions himself to the side of the sound wall to take his spy videos.[4]

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[3] Until recently, Amazon ran lights powered by diesel generators, which ran all night long. The owner of the property, Mr. Bob Jonas, realized that the noise and glare could be an impact on neighbors, and he authorized PGE to install electrical service so that a quieter light source could be used instead. He also took steps to position the lights so that they caused less glare than the previous lights Amazon had been using. This shows that Mr. Jonas has been taking expensive measures to voluntarily mitigate impacts, just as Brown Contracting has done.

[4] In my 27 years of practicing land use law, I have been involved in a few cases where neighbors take spy videos and drone videos. Some opponents even taken video of me when I conduct site visits. This is often viewed as an intimidation tactic, and is never well-received by those persons being filmed. It always degrades neighbor relationships, and mostly with little benefit to the person filming. Nobody likes a creeper hiding in the bushes taking spy videos or flying overhead with a drone because it is highly invasive. Mr. McClendon obviously feels as if Brown Contracting has not been responsive to his requests, but it is likely that his filming has not been well-received by Brown Contracting employees.

In summary, the McClendons make a plethora of allegations, but many of their statements are either blatantly false or exaggerated to some degree or another. The hearings officer should give less weight to the allegations made by the McClendons, especially when they are merely anecdotal in nature.

C. Scope of the Prior Land Use Approval and Conditions of Approval.

The opponents correctly point out that the current operations on the site exceed what was contemplated by the 2015 land use approval. However, this application seeks to remedy that problem.

Mr. McClendon states that the 2015 approval contained "many restrictions including daily trip count, vehicle height, hours of operation, etc." Whether these "restrictions" actually exist is debatable, but they stem from the following condition of approval:

III. OPERATIONAL LIMITATIONS FOR THE CONTRACTOR'S ESTABLISHMENT:

This approval is limited to the vehicles, equipment, and operation as outlined in the Staff Report. The addition of other uses, features, vehicles, or heavy equipment to this operation at this site may require subsequent approval through the land use application process. (Section 207-5)

With regard to noise and hours of operation, the 2015 land use approval did not impose specific hours of operation as formal conditions of approval. Oddly, opponent Tina McClendon argues that "the hours of operation were clearly set forth in the permit," but that is simply not true.

The 2015 land use approval does not impose a specific condition of approval requiring compliance with the Washington County Noise Ordinance ("WCNO"). Nonetheless, the WCNO operates independently of land use approvals, which is to say that it is binding on all land owners regardless of whether a specific condition of approval exists. Staff did write a finding stating that "[t]he applicant shall be required to comply with the Washington County Noise Ordinance at all times." 2014 Staff Report at p. 8. Furthermore, the applicant said in their application narrative that they would comply with the WCNO,[5] so we are not questioning its applicability.

[5] Representations made by the developer in a land use process are binding on the developer, if the developer made those representations in order to meet applicable approval criteria. *See Frankland v. City of Lake Oswego*, 267 Or 452, 517 P2d 1042 (1973); *Friends of the Metolius v. Jefferson Co*., 25 Or LUBA 411, 421 (1993); *aff'd*, 123 Or App 256, *on recons*, 125 Or App 122 (1993); *Perry v. Yamhill County*, 26 Or LUBA 73, 83 (1993); *Wilson Park Neighborhood Ass'n v. City of Portland*, 27 Or LUBA 106, 123-4 (1994); *Saylor v. Durham*, 63 Or App 327, 663 P.2d 803 (1983). The flipside of the *Frankland* rule is that gratuitous testimony – defined as testimony that does not relate to an approval standard or criteria – is not binding on the applicant.

What is less certain, however, is what the WCNO actually requires. The parties seem to have considerable disagreement over this issue. The staff report notes the following:

> "No letters of comment have been received requesting specific hours of operation. It should be noted, however, that the Washington County Noise Ordinance may require the applicant to limit the hours of operation of the site between 7am and 7pm, Monday through Saturday, in order to ensure compliance with this ordinance."

2014 Staff Report at p. 4. Although we recognize that this is a common misreading of the WCNO, we disagree that the WCNO actually sets any sort of hours of operation for a construction contractor site (as opposed to a construction site). This is discussed in more detail herein.

Mr. McClendon states that "Brown's stated hours of operation of 8:00 -5pm Monday – Friday should be their permitted operating hours." *See* Letter from Eric McClendon dated May 30, 2024 at p. 5. We are unsure of where Mr. McClendon comes up with the 8 A.M. number; we do not recall the applicant having made that statement.

To the contrary, in a letter dated August 5, 2014 to Nancy Kraushaar, City of Wilsonville, Brown Contracting's co-owner, Mr. Sean Emick, stated that "employees arrive around 7am, might leave once or twice a day for an errand or meeting, and then complete their work and leave the site around 4pm, Monday through Friday." That was intended to describe typical operations for purposes of trip generation. It was not for the purpose of setting strict limitations on the hours of operation, and such limitations would be impractical.

Brown Contracting does occasionally work on transportation projects that require night operations. In those situations, employees assigned to that project will arrive to the site via personal vehicles between 6 and 7 P.M., depart the property in company vehicles soon thereafter, and return at 4 A.M. This is a small percentage of the firm's normal operations, but it is necessary in this profession, especially on DOT projects that need to be completed when traffic is at its lowest.

We request that the hearings officer not impose an absolute limit on hours of operation. However, we are willing to accept a condition of approval that requires prestaging of vehicles and equipment needed for night operations during day light hours, so as to limit noise and glare from headlights during hours of limited visibility. We note, in this regard, that expanding the operations to TL 302, TL 303, TL 310, and TL 311 will provide Brown Contracting with more room to conduct staging operations father away from the McClendon property.

Moving on, the 2015 land use approval also does not have any condition of approval related to vehicle height, other than the generic "Condition III" quoted above. The 2014 staff report addresses CDC 423-9.2, which prohibits the open storage of materials and equipment

"unless contained by a [sight] obscuring fence or landscaping screening." The 2014 staff report states:

> The Applicant indicates that storage will occur toward the center of the site, and that the tallest utility trucks to be on the site are 8.75 feet high and the tallest stockpiles are typically 5-6 [feet] high. Accordingly, a 6-foot-tall sight-obscuring fence should be adequate to screen the storage."

It is unclear why the 2014 staff discussed vehicles in the context of CDC 423-9.2, as vehicles are not generally interpreted to constitute "equipment." The applicant did indicate it would have at least one 3-axle dump-truck on the site, and the photograph it submitted in 2014 of the dump-truck is clearly taller than 8.75 feet in height. Mr. McClendon reads the combination of Condition III and the above-quoted statement in the staff report as creating a formal restriction on vehicle height. Given that statements in an application that do not relate to an approval criterion do not become *de facto* conditions, we do not agree that the vehicle heights are so limited. Nor should they be.

Finally, with regard to trip counts, we again do not agree that the 2015 land use approval had a formal trip count limit. The applicant's August 5, 2014 letter to Nancy Kraushaar, City of Wilsonville, did attempt to "estimate" the number of employees and the number and types of vehicles. However, the letter also noted that the number of employees fluctuated seasonally. Based on that letter, staff concluded that the "*minimum* trip generation from the proposed contractor establishment use can be assumed as approximately 52 trips per day." *See* Attachment D to 2014 staff report, at p. 1 (Emphasis added). Staff went on to note that this 52 ADT estimate "excludes additional trips by material suppliers, office employees, and other potential trips to/from the site." *Id*. Given the totality of the circumstances, we do not believe it is correct to interpret the 2015 decision as containing a formal "restriction" on "daily trip count," as Mr. McClendon asserts.

Having said that, we acknowledge staff's efforts to try to avoid some of the problems with the 2015 approval. Staff has proposed a new Condition VII ("Operational Limitations for the Contractor Establishment") that attempts to draw some goalposts around any further expansion, and we are in agreement with that condition.

D. Noise.

1. Application of the DEQ Noise Standards.

Mr. McClendon's May 30, 2024 letter is mostly focused on "noise" and what he characterized as "vibration" impacts. The County has two different standards governing these two separate issues. Unfortunately, Mr. McClendon attempts to apply the WCNO to alleged vibrations. The irony is that Mr. McClendon argues that "the noise ordinance isn't hard to interpret," but then he proceeds to misinterpret it in multiple respects. Despite Mr. McClendon's

suggestions to the contrary, the WCNO is deceptively complex, and, in our experience, even the county staff and sheriff's deputies tasked with enforcing it do not have a common understanding of its operative provisions.

The county's 2024 staff report cites an outdated version of Washington County Community Development Code ("CDC") 423-6. *See* staff report, at p. 19. At the time Brown Contracting obtained their land use entitlements in 2015, CDC 423-6 required compliance with DEQ standards, not the WCNO:

> *"[a]ll development shall comply with the State Department of Environmental Quality Standards relating to noise. Demonstration of compliance may be required by the Review Authority."*

The DEQ standards cited by CDC 423-6 (2015 ed.) are found at OAR 340-035-0035. These DEQ rules are still binding law. Neither DEQ nor Washington County enforce the DEQ rules, in large part because they do not employ personnel trained to do so. Having said that, Policy 5 of the County's "Comprehensive Framework Plan for the Urban Area" is entitled "Noise" and states that "[t]he County will * * * (b). Comply with the Department of Environmental Quality Noise Standards."

OAR 340-035-0035
Table 7
Existing Industrial and Commercial Noise Source Standards
Allowable Statistical Noise Levels in Any One Hour

7:00 a.m. – 10:00 p.m.	10:00 p.m. – 7:00 a.m.
L_{50} – 55 dBA	L_{50} – 50 dBA
L_{10} – 60 dBA	L_{10} – 55 dBA
L_1 – 75 dBA	L_1 – 60 dBA

For purposes of this case, the applicable DEQ noise regulation is the one that applies to new industrial and commercial noise sources. That regulation provides that such facilities may not "increase the ambient statistical noise levels, L_{10} or L_{50}, by more than 10 dBA [A weighted decibels] in any one hour * * *." OAR 340-035-0035(1)(b)(B)(i). The DEQ rules also set forth the decibel limits. The measurement point is 25 feet from a noise sensitive building. OAR 340-035-0035(3)(b).[6] *See generally Watts v. Clackamas County*, 51 Or LUBA 166 (2006) (discussing differences between L_{max} and L_{10}.); *Butcher v. Washington County*, 65 Or LUBA 263 (2012) (discussing the operation of the DEQ standards).

[6] OAR 340-035-0035(3)(b) provides:

(b) Unless otherwise specified, the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:

(A) 25 feet (7.6 meters) toward the noise source from that point on the noise sensitive building nearest the noise source;

The applicant submitted a noise study titled "McClendon Residence Noise Levels" from Kerrie G. Standlee, P.E. of DSA. Inc., dated May 14, 2024. This letter provides substantial evidence that both the DEQ standards and the Washington County Noise Ordinance are met.

Mr. McClendon critiques the DSA study in his May 30, 2024 submittal in four particulars:

1. Mr. McClendon argues that "the sound 'study' left out the noisiest and worst vibration-causing machines and tools." He faults the study for not including cement trucks, volumetric trucks, tankers, impact wrenches and woodchippers. Brown Contracting's acoustic engineer, Kerrie G. Standlee, P.E. addresses Mr. McClendon's flawed analysis in detail. See Exhibit 28 (Letter from Kerrie G. Standlee, DSA, dated June 9, 2024, at p.5). In addition:

   Applicant Response:

   - The applicant parks and performs maintenance on cement trucks on site, but does not mix or "batch" cement on site. *See* Exhibit 39 (Declaration of Don Brown dated June 10, 2024).
   - The cement trucks are no louder than the dump trucks. *See* Exhibit 28 (Letter from Kerrie Standlee, DSA, dated June 9, 2024, at p.5).
   - The applicant does have one "volumetric truck"[7] on site and 2 ready-mix trucks on site.[8] These vehicles are parked on the site and occasionally receive some routine maintenance on-site, but are otherwise not operational on site. *Id.*
   - It is unclear what Mr. McClendon means when he uses the term "tanker truck." Brown Contracting does not have fuel tanker trucks on site. Occasionally an outside vendor fills the three fuel tanks on site using a fuel tanker truck. Brown Contracting does have water trucks, but they make no more noise than any other truck. *Id.*
   - The applicant does use "impact wrenches" inside the shops. However, an impact wrench is no louder than any of the tested items. *Id.*

[7] Volumetric trucks are essentially mobile concrete plants. They carry the separate ingredients for concrete (sand, cement, water, and other mixtures) in separate compartments and mix them on-site as needed. This allows the operator to adjust the mix design and volume on the fly, providing flexibility in terms of quantity and type of concrete produced.

[8] Ready mix trucks transport pre-mixed concrete from a central batch plant to the job site. The concrete is mixed at the plant, loaded into the drum of the truck, and then kept in motion until it is time for it to be poured. This type of concrete truck allows for efficient, cost-effective delivery of large amounts of concrete without having to spend time mixing it on site.

- ❖ The applicant does not use a woodchipper on-site. The applicant had used a wood chipper for short periods of time at the southernmost portion of the site in the past, but quit doing so to lessen its noise impacts. *Id.*

2. Mr. McClendon finds fault with the fact that "the sound 'study' tested each piece of machinery in isolation." He claims that "it is common for most of the noises cited in the 'study' to occur simultaneously, especially during busy times" and that "[t]esting in isolation created very misleading measurements."

   Applicant Response: This issue is addressed by Mr. Standlee in his letter dated June 9, 2024, at p. 5. Exhibit 28. Mr. Standlee concluded that the machinery passes DEQ standards regardless of what combination of machines are operated at the same time. It is standard scientific protocol to measure sources separately, and then analyze the data in various combinations. *Id*.

3. Mr. McClendon argues that he has recorded "many decibel readings in the 60s, 70s 80s (Dropbox Attachment)." He further states:

   > "As stated by Brown's attorney, anything over 55 [dBA L50] is problematic, and we agree. Again, we can feel the vibration of heavy trucks from every room in the house. The noise and vibration are much greater than the "whisper from five feet away" described by Mr. Stamp." *See* letter from Eric McClendon dated May 30, 2024, at p. 7-8.

   Applicant Response. Mr. McClendon did indeed submit a video via Dropbox entitled "Decibel Reader 60, 70, 80." Therein he attempts to take him own amateur sound measurements with a $50 sound meter, but the result is a hot mess. His video does not constitute substantial evidence because it contains a number of critical flaws:

   - ❖ His meter is not of sufficient quality to be used to meet legal standards.
   - ❖ His meter is set to the "C weighted" network, whereas the DEQ regulations are based on "A Weighted" network.[9]

[9] The applicant submitted background information prior to the hearings which explains what is meant by "A weighting" filtration:

> Most sound level meters and dosimeters use built-in frequency filters or "weighting networks" in the measurement process. By far the most frequently used filter is the A weighting network, which discriminates against low-frequency and very high-frequency sounds. A weighting approximates the equal-loudness response of the ear at moderate sound levels, and correlates well with both hearing damage and annoyance from noise.

See Dr. Alice H. Suter, Noise and Its Effects, Administrative Conference of the United States (November 1991).

- ❖ The measurement is taken very close to the property line, instead of the location specified by OAR 340-035-0035(3)(b).
- ❖ The meter is reading instantaneous measurement ($L_{max)}$ not L_1, L_{10}, or $L_{50,}$ as required by the DEQ rules.
- ❖ Mr. McClendon does not submit any verification that the sound meter was properly calibrated.

See Exhibit 28 (Letter from Kerrie Standlee, DSA, dated June 9, 2024, at p. 5-6). This video does not constitute substantial evidence because no reasonable decisionmaker would rely on its flawed methodology to draw a factual or legal conclusion.

Mr. McClendon demonstrates his lack of understanding of the DEQ rules in a number of particulars. He states that "[t]he [DSA] study was also conducted over 125 feet from the fence, not 25 as represented by Mr. Stamp." Perhaps Mr. McClendon misunderstood my comment, or perhaps I was not clear, but OAR 340-035-0035(3)(b) specifies that the measurement be taken 25 feet from the McClendon residence. Had Mr. McClendon familiarized himself with the DEQ rules, he would have understood that DSA took the measurements at the correct location.[10]

4. Mr. McClendon concludes by giving his opinion about the source of the noise:

> "[o]ther than Brown Contracting, the area is relatively quiet. Mr. Stamp argues that "background noise" and traffic are the true culprits here, along with the Amazon parking lot on SW Day and SW Boones Ferry. The truth is that the area is mostly large-lot residential, with a PGE substation in the distance that makes no noise. Amazon has installed a large earthen berm along their boundary with the neighborhood which protects us from noise and light. Brown is the only property causing unreasonable noise and vibration.

Applicant Response. Mr. McClendon is entitled to his opinion; however wrong it is. Stating that Brown Contracting is the only neighbor that generates noise is simply not credible. As demonstrated by Figures 1 and 2 below, the Amazon site is still under development, and has been operating an excavator and bulldozers on site for a long time. The PGE site is currently under construction, and so is the site directly to the

[10] Mr. McClendon submitted a photograph entitled "[a]ctual distance between sound study location on porch and property line" where he unwittingly confirms that the sound measurement was made correctly from the "porch." This exhibit highlights Mr. McClendon's problem: he simply does not understand how the DEQ standards work. He thinks that any sounds that he hears is a violation, and that the standard requires complete quiet. He never even acknowledges that he lives in a mixed-use neighborhood adjacent to two arterials, where the ambient noise is quite high.

south of Brown Contracting, owned by Delco Holdings, LLC. All of these sites generate considerable construction noise. Having said that, Brown Contracting installed a large sound wall at considerable expense in an effort to be a good neighbor. Brown Contracting has made efforts to train its employees to be sensitive about noise, especially after hours.

Figure 1: Surrounding construction activity on 5/13/2023

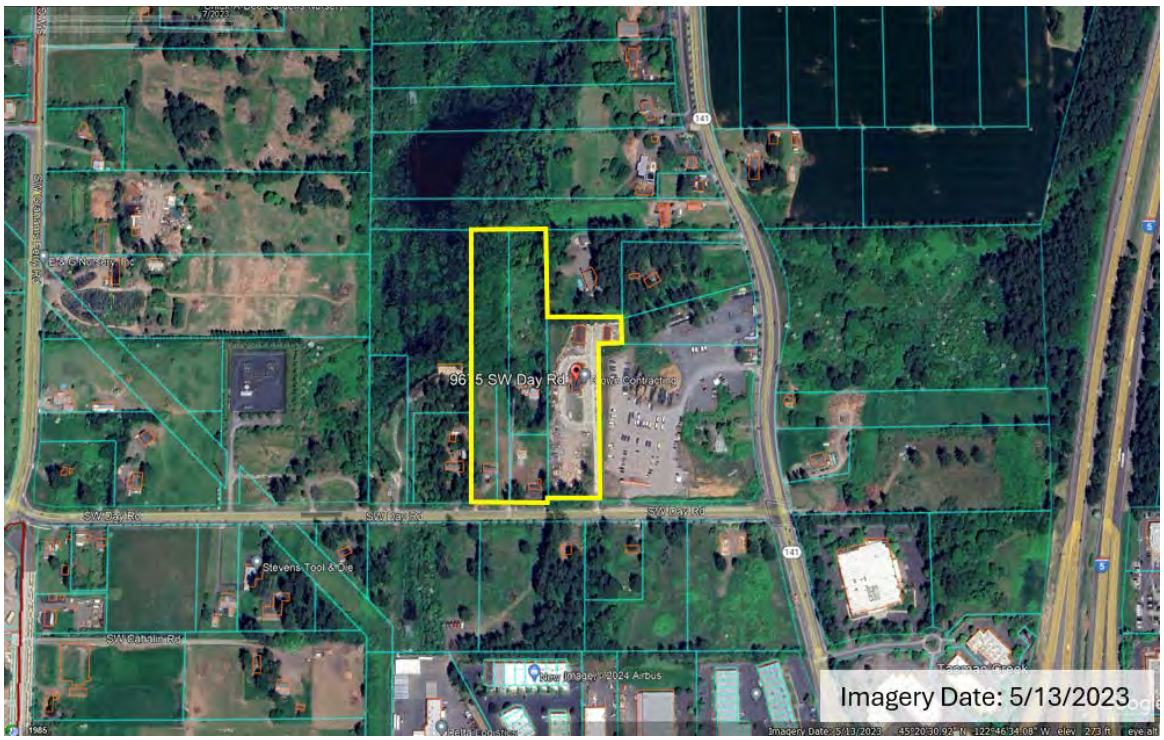
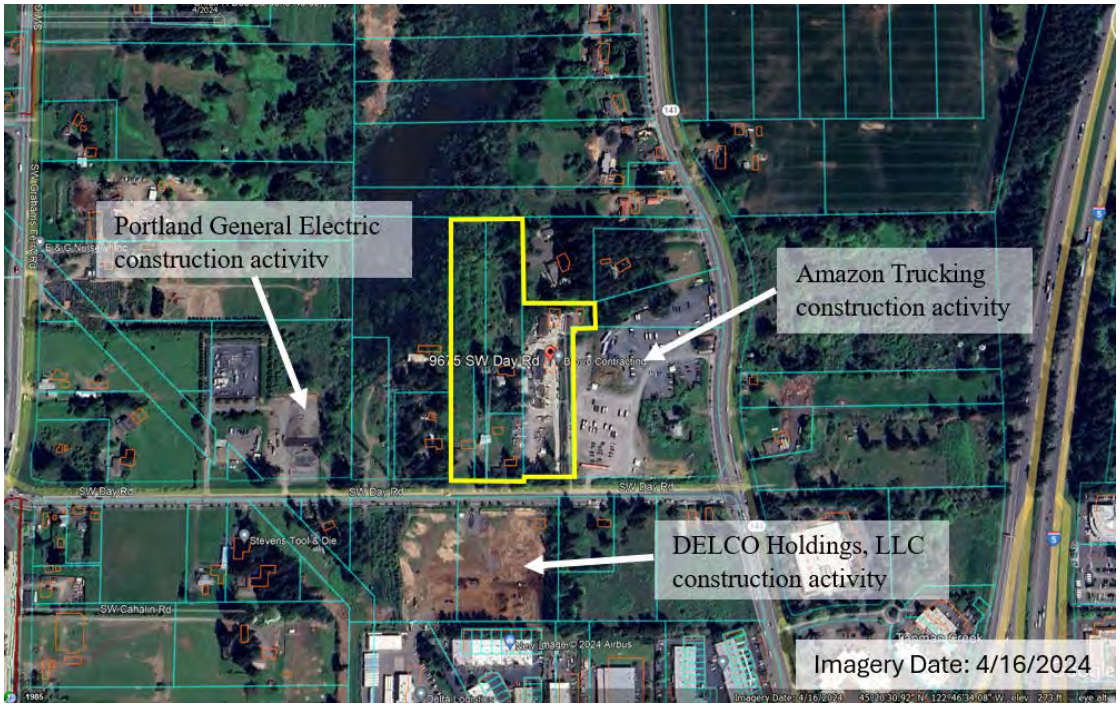


Figure 2: Surrounding construction activity on 4/16/2024



While it is true that cutting down the trees on TL 302, 303, 310, and 311 did likely cause the noise from Day Road to travel farther to the north, Brown Contracting was well within its rights to perform those tree cutting operations. The tall mature trees in this area are mostly in poor health, and most – if not all- will be dead within the next 10 years due to various tree root funguses that are prevalent in the soils. *See* Images 30-32 to Exhibit 24, Letter from Andrew H. Stamp dated May 30, 2024 (Showing dead and dying trees with thin unhealthy vegetative tops).

2. Application of the Washington County Noise Ordinance.

The current version of CDC 423-6 does not reference the DEQ standards, but rather sets forth the following criterion related to noise:

> *CDC 423-6 Noise*
>
> *All development shall comply with Chapter 8.24 of the Washington County Code of Ordinances relating to noise control. Documentation required to demonstrate compliance may include analysis from a registered professional acoustical engineer.*

As we mentioned above, we do not take issue with the fact that the county can enforce its

noise ordinance irrespective of land use approvals. The WCNO operates independently from the land use process, and can be viewed as an ongoing condition of approval to any land use. The county could make continued compliance with the WCNO a condition of approval.

Having said that, it is somewhat curious that the CDC states that "documentation required to demonstrate compliance may include analysis from a registered professional acoustical engineer." Noise engineers will typically collect noise measurements and report conclusions based on that data using DEQ's methodology. While an expert can certainly offer their opinion about whether the WCNO's subject standard is met, it is necessary - as a practical matter – to use the DEQ standards as a surrogate of reasonableness.

Unfortunately, there is considerable confusion about the operation of the noise ordinance. The McClendon family and Jackie Mathys seems to have a much different understanding of this ordinance than the applicant.

First and foremost, the noise ordinance does not impose general-purpose 7 A.M. to 7 P.M. "quiet hours," as suggested in the above-quoted section of the staff report. Nor does it prohibit a landowner from making the types of noises typically associated with a construction contractor's business. Understanding why this is true requires a basic understanding of the noise ordinance.

Based on the language used, it is apparent that the WCNO is largely derived from a Model Ordinance developed in the 1970s. Having said that, some portions of the WCNO are modified versions of commonly-used code that date back to at least the early 1950s. *See People v. New York Trap Rock Corp,* 57 N.Y.2d 371, 456 N.Y.S.2d 711, 442 N.E.2d 1222 (N.Y. 1982); *Stoffel Seals Corp. v. Village of Truckahoe*, 134 N.Y.S.2d 114 (1954).

The WCNO has two separate and distinct operative sections:

(1) WCNO 8.24.040 sets forth a list of "enumerated acts" which the Ordinance deems to be *per se* evidence of a violation.

(2) WCNO 8.24.030 is known by courts and legal scholars as a "catch-all" provision. In a nutshell, it essentially makes it unlawful to make an unreasonable amount of noise. Unlike the "enumerated acts" section, the "catch-all" section is intended to be flexible enough to apply in a myriad of situations.

The "catch-all" provision (WCC 8.24.030) states:

> *8.24.030 - Standards generally.*
> *It is unlawful for any person to make, continue or cause to be made or continued, any noise which unreasonably annoys, disturbs, injures, or endangers the comfort, repose, health, peace or safety of any person of normal sensitivity in a noise sensitive unit. The standard which shall be utilized in determining whether a violation of*

> *the provisions of this chapter exists shall include, but not be limited to, the following:*
>
> *A. The volume of the noise;*
> *B. The intensity of the noise;*
> *C. Whether the nature of the noise is usual or unusual;*
> *D. Whether the origin of the noise is natural or unnatural;*
> *E. The volume and intensity of the background noise, if any;*
> *F. Whether the noise is plainly audible within a noise sensitive unit;*
> *G. The nature and zoning of the area within which the noise emanates;*
> *H. The density of the inhabitation of the area within which the noise emanates;*
> *I. The time of day or night the noise occurs;*
> *J. The duration of the noise;*
> *K. Whether the noise is recurrent, intermittent, or constant.*

At its core, WCC 8.24.030 applies a tort standard similar to nuisance: it prohibits people from making noise which *unreasonably* annoys or disturbs a person of "normal sensibility" who is physically located *within* a "noise sensitive unit" at the time the noise is created. (Emphasis added).

The "catch-all" provision, therefore, has limited applicability insomuch as it only applies in cases where a "noise sensitive unit" exists in proximity to the noise. Stated another way, there must be a "noise sensitive unit" present to trigger a violation of this portion of the Ordinance. The WCNO defines the term "noise sensitive unit," as follows:

> *"Noise sensitive unit" means any building or portion thereof, vehicle, boat or other structure used as a church, day care center, hospital, nursing care center, school, or place used for overnight accommodations of persons, including, but not limited to, individual homes, individual apartments, trailers and nursing homes.*

WCC 8.24.015. Further note that the receptor location from which the "reasonableness" evaluation is measured is *from <u>inside</u> the noise sensitive unit.* WCC 8.24.030.

The "noise sensitive unit" requirement makes it difficult, in most cases, for the county to get a conviction for a noise violation unless there is some evidence of the volume and intensity of noise as it was perceived *inside* a noise sensitive unit.

There may be situations where the noise is so loud that a fact-finder could make a reasonable inference of unreasonableness without evidence of the volume of noise within a noise sensitive unit. For example, if a person is driving down a crowded residential city street with a Harley Davidson motorcycle equipped with straight pipes, that person should hardly be surprised

if they are cited for creating a noise that unreasonably annoys persons in a noise sensitive unit fifty feet away. Motorcycle "straight" pipes emit sounds in the 140 dBA range, and it would be a matter of common knowledge and perception that the sound attenuation from the home's insulation and the distance from the pipe would not be sufficient to make such sounds "reasonable." *See, e.g., People v. Frie*, 646 NYS2d 961, 964 (1996) (noting that what is usual noise in the operation of a car has become common knowledge, and that an ordinary motorist would have no difficulty in ascertaining whether any particular vehicle generates excessive or unusual noise.). However, unlike the motorcycle hypothetical, the typical day-to-day sounds emitted by Brown Contracting do not rise to the level which *unreasonably* annoys or disturbs a person of "normal sensibility."[11] This is particularly true since the contractor establishment pre-dates the McClendon ownership. WACO 8.24.030(G).

In his letter submitted on May 30, 2024, Mr. McClendon states:

> Mr. Stamp's broad overview omits key elements of the noise control ordinance, although he concedes that the ordinance prohibits unreasonable noise and admits that the prohibition is "problematic" for the applicant.

As a clarification, the "catch-all" provision is "problematic" to any person subject to its mandate because it is difficult, if not impossible, to know when its terms are violated. It is a subjective and largely unenforceable standard, after all. Having read scores of noise violation cases from throughout the county, I think it is fair to conclude that most of the time when noise convictions are upheld under the catch-all, it is because the activity was an obvious clear-cut violation, and not a close call. Factor "F" goes to this point: the activity should be "plainly audible."

With regard to WCC 8.24.030(F), the term "plainly audible" is further defined, as follows:

> *"Plainly audible" means any sound for which the information content of that sound is unambiguously communicated to the listener, such as, but not limited to, understandable spoken speech, comprehensible musical rhythms or vocal sounds.*

[11] In this regard, the owners of TL 306, the McClendon family, are not persons of "normal sensibilities." Rather, they are vexatious litigants who have filed numerous complaints for all measure of perceived wrongs and injustices, and all of those complaints have been found to be either meritless or greatly exaggerated. The complaints filed by the McClendons and/or their surrogates include (1) County noise complaints, (2) County grading complaints, (3) County signage complaints, (4) land use violations, (5) DEQ Clean Water Act / water quality complaints, (6) DSL wetland Fill/Removal law complaints, and (7) Clean Air Act complaints. The only complaint that was partially substantiated was the tree-cutting permit violation, and even then, the county only found that a small portion (less than 1%) of total land where tree-cutting occurred was regulated by WCC 422 as riparian habitat.

WCC 8.24.015. This language is an also an attempt to save the ordinance from due process concerns over vagueness, because it is telling police officers and enforcement officers to only cite violators in the most clear-cut of situations.

Indeed, in *City of Portland v. Aziz*, 47 Or App 937, 615 P.2d 1109 (1980), the Oregon Court of Appeals considered a regulation that made it unlawful to operate a sound production device between specified nighttime hours "so as to be plainly audible within any dwelling unit which [was] not the source of the sound." The court held this to be an adequately clear standard, even though application of the ordinance could vary based on factors such as the amount of insulation in a building. The court noted the "plainly audible" definition creates a high standard, since spoken speech need not only be audible, it must be "comprehensible" to violate the standard:

> While this definition is not a model of clarity, we find that it is not void for vagueness. Two of the examples of "sound for which the information content * * * is unambiguously communicated" are clear: "understandable spoken speech" and "comprehensible musical rhythms." As the defendant notes, the difficulty lies in reconciling the example of "understandable spoken speech" with "comprehension of whether a voice is raised or normal." However, as we read the ordinance, the examples are compatible. The second example, "whether a voice is raised or normal," applies in situations where volume is the only "information content;" for example, being able to tell that the amplified voice emanating from one's neighbor's television set is screaming.

Thus, the term "plainly audible" is intended to fill the gap between the subjective listener response of annoyance and the objective measure of sound levels. It provides the enforcing authority and the citizen with a criterion for evaluating how unreasonable a sound might be, and provides an enforcement officer a means for confirming a violation without sound level meter measurements.

We turn to the second operative provision of the WCNO. Unlike the "catch-all" provision, the "enumerated acts" found at WCC 8.24.040 are intended to provide objective examples of prohibited conduct, often without subjective qualifiers. Although Black's Law Dictionary defines "*per se*" to be a finding "as a matter of law," and prima facie evidence to be merely a rebuttable presumption, courts frequently consider the words "prima facie" in an ordinance to have the same effect: mere conduct of the act ensures a conviction of a violation. Black's Law Dictionary 1178, 1228 (Bryan A. Garner ed., 8th ed., West 2004). An example of this treatment can be found in *Duffy v. City of Mobile,* 709 So. 2d 77, 81 (Ala. Crim. App. 1997), in which the court stated that declaring a sound to be prima facie evidence of a violation had the same effect as "an absolute prohibition" of the sound.

This list of "*per se*" violations is set forth below, four of which are underlined and discussed below due to the fact that Mr. McClendon claims that they apply here:

8.24.040 - Enumeration of acts in violation.

The following acts are prima facie evidence of a violation of this chapter, but said enumeration shall not be deemed to be exclusive, namely:

A. Horns, Signaling Devices, Etc. Sounding of any horn or signaling device on any automobile, motorcycle, or other vehicle on any street or public place in the county, except as a danger warning; the creation by means of any signaling device of any unreasonably loud or harsh sound; and the sounding of any such device for an unnecessary and unreasonable period of time;

B. Radios, Phonographs, Etc. The using, operation or permitting to be used, played or operated any radio receiving set, television set, musical instrument, phonograph, compact disc player, loudspeaker or other machine or device, for the production or reproduction of sound between the hours of ten p.m. and seven a.m. in such a manner as to be plainly audible upon a public street or within a noise sensitive unit which is not the source of sound;

C. Exhaust Brakes. The use of exhaust brakes except when used for an emergency stop or to slow to avoid a collision;

D. Yelling Shouting, Etc. Yelling, shouting, hooting, whistling, or singing on the public streets, between the hours of ten p.m. and seven a.m.;

E. Exhausts. The discharge into the open air of the exhaust of any steam engine, stationary internal combustion engine, motor boat, motorcycle, or motor vehicle except through a muffler or other device which will effectively prevent loud or explosive noises therefrom;

F. Construction or Repairing of Structures. The erection (including excavating), demolition, alteration or repair of any structure from seven p.m. to seven a.m. the following morning, and from seven p.m. Saturday to seven a.m. the following Monday, and on legal holidays except by variance or by reasons of emergency;

G. Piledrivers, Hammers, Etc. The operation between the hours of seven p.m. and seven a.m. of any piledriver, steam shovel, pneumatic hammer, derrick, steam or electric hoist, or other equipment, the use of which is attended by loud or unusual noise except by variance or for reasons of emergency;

H. Blowers and Motor-Driven Cycles. The operation of any blower or power fan unless the noise from such blower or fan is properly muffled and such engine is equipped with a muffler device sufficient to reduce such noise. (Emphasis added).

None of the "enumerated acts" provisions are triggered by the facts of this case despite Mr. McClendon's misconceptions and general confusion shown regarding their application.

First, Mr. McClendon argues that the applicant violates WCC 8.24.040(A). However, that prohibition contains an express geographical limitation: it only applies to vehicles located "on any street or public place in the county." Mr. McClendon does not provide evidence that Brown Contracting uses a "horn or signaling device" on a street or public place.

Second, Mr. McClendon accuses the applicant of violating WCC 8.24.040(C), which prohibits the use of "exhaust brakes" except "when used for an emergency stop or to slow to avoid a collision." According to Wikipedia, an exhaust brake:

> … is a means of slowing a diesel engine by closing off the exhaust path from the engine, causing the exhaust gases to be compressed in the exhaust manifold, and in the cylinder. Since the exhaust is being compressed, and there is no fuel being applied, the engine slows down the vehicle. The amount of negative torque generated is usually directly proportional to the back pressure of the engine.

Exhaust brakes are only used by diesel vehicles traveling that relatively high speeds, and typically when the vehicle is under a heavy load. This is not the type of brake that would be used on site. *See* Exhibit 39 (Declaration of Don Brown dated June 10, 2024).

Third, Mr. McClendon accuses the applicant of violating WCC 8.24.040(F), but that provision applies to this case only in limited circumstances. That provision applies only to the act of "construction"[12] of a "structure," which is limited to *construction sites*. As an example, that provision would apply if and when Brown Contracting builds any structure on the subject property, such as the open-air pole building requested by this application. However, the normal / routine day-to-day activities on the subject property do not fall within the scope of WCC

[12] The word "construction" is not defined. WCC 1.04.030 is entitled "Interpretation of language" and states:

> *All words and phrases shall be construed according to the common and approved usage of the language, but technical words and phrases and such others as may have acquired a peculiar and appropriate meaning in the law shall be construed and understood according to such peculiar and appropriate meaning.*

Webster's Third New International Dictionary, Unabridged (2002) defines the term "construction" as follows:

> 2a. The act of putting parts to form a complete integrated object: Fabrication <during the ~ of a bridge>

The day-to-day activities on the site do not constitute "construction" of a "structure." At most, it is staging activity for a business that engages in construction off-site, as well as the maintenance and repair of vehicles and equipment.

8.24.040(F). To the contrary, Brown Contracting employees are not engaging in the act of "construction" *of a structure* when they conduct their day-to-day business on site.

Mr. McClendon expresses his disagreement with the above analysis in this passage from page 5 his May 30, 2024 submittal:

> The ordinance expressly lists as violations, without limitation, various construction-related activities between the hours of 7:00 p.m. and 7:00 a.m. during weekdays and from 7:00 p.m. Saturday to 7:00 a.m. the following Monday. WCC § 8.24.040.F. The prohibition on unlawful noise between 10:00 p.m. and 7:00 a.m. and all day on Sundays for any "construction noise" is further embodied in the opening paragraph of the official WACO Noise Complaint Form. Contrary to Mr. Stamp's argument, no authority limits the noise restrictions to "active" construction.

Why Mr. McClendon puts the phrase "construction noise" in quotes is unclear, because the WCNO never uses that phrase. Conversely, Mr. McClendon conveniently overlooks the fact that the ordinance concerns itself with the construction and repairing of "structures." As discussed above, the applicant's day-to-day activities on site do not involve the construction or repairing of structures, and therefore WCC 8.24.040(F) simply does not apply.

The "Noise Complaint Form" is not an officially enacted law, so it has no relevance to the interpretational question. Having said that, it is worth noting that even the county's "Noise Complaint Form" hopelessly confuses legal concepts when it states:

> Washington County Code Chapter 8.24.030 states that it is unlawful for any person to make, continue or cause to be made or continued, any noise, which unreasonably annoys, disturbs, injures or endangers the comfort, repose, health, peace or safety of any person of normal sensitivity in a noise sensitive unit (dwelling). This prohibition generally applies between the hours of 10:00 p.m. and 7:00 a.m. Monday through Saturday, and all day on Sunday.

This statement confuses the two different and independent provisions of the WCNO. The "catch-all" provision at WCC 8.24.030 *applies at all hours of the day,* but one of the factors is intended to give the enforcement authority some discretion to define reasonableness more strictly at night. WCC 8.24.030(I). In contrast, four separate and independent prohibitions in the "Enumerated Acts" provision set forth at WCC 8.24.040 reference specific time periods. The statement in the form is incorrect to the extent that it blends these two separate and independent requirements.

Fourth, WCC 8.24.040(G) prohibits "[t]he operation between the hours of seven p.m. and seven a.m. of any piledriver, [13] steam shovel, [14] pneumatic hammer, [15] derrick, [16] steam or electric hoist,[17] or other equipment, the use of which is attended by loud or unusual noise except by variance or for reasons of emergency." Brown Contracting does not employ any piledrivers, steam shovels, pneumatic hammers, derricks, steam hoists, or electric hoists. While the "catch all" term "*or other equipment*" may seem to have broad applicability to the uninitiated, due process and statutory construction requires that the term must be read in the limiting context of the other enumerated examples.[18] In short, Brown Contracting does not operate any equipment that is *similar* to piledrivers, steam shovels[19], pneumatic hammers, derricks, steam hoists, or electric hoists. Therefore, WCC 8.24.040(G) does not apply.

Mr. McClendon argues that "the enumerated list is not exhaustive." His statement is

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[13] A "pile driver" is a heavy machine used to drive piles into the ground. Piles are long cylindrical structures made of steel, concrete, or wood that are used to support structures built on the ground, such as buildings, bridges, and highways. They are installed by driving them deep into the ground, where they anchor the structure and provide stability.

[14] A "steam shovel" is an early type of excavator invented in 1839s. The steam shovel used steam and could be quite loud in its operation. It was largely replaced by hydraulic excavators in the 1940s and 1950s.

[15] The "pneumatic hammer," also called air hammer, power hammer, or air chisel, is a power tool that uses compressed air exclusively. The tool is used to carve, drill, or chip away at stone, metal, and other hard materials. Air hammers are used to cut through a surface, dig a hole, smoothen a surface, or shape one. As a cutting tool, the air hammer replaces the manual hammer and chisel because of its tremendous speed to do a job. Pneumatic hammers are usually attached to air rams or pneumatic valves that are then attached to a tube or hose and to a large compressor tank that pumps up air to make the air hammer work.

[16] A "derrick" is an apparatus similar to a crane but consisting of a mast or equivalent member held at the head by guys or braces, with or without a boom, for use with a hoisting mechanism and operating ropes.

[17] A "steam hoist" was a device used to list heavy equipment using steam boilers. They were commonly associated with factories and the mining industry. They were largely replaced by safer electric powered hoists in the 1930s and 1940s.

[18] *Ejusdem generis* is "the rule of statutory construction which 'allows the general terms of an act [*i.e*., a catch-all phrase] to be modified and limited by the enumeration of specific examples preceding [or following] the general language.'" *State v. Hutchins,* 214 Or App 260, 267, 164 P3d 318 (2007), *rev. granted,* 344 Or 280 (2008), *appeal dismissed*, 345 Or. 690, 201 P.3d 911, *rev. den*., 346 Or. 590, 214 P.3d 822 (2009) (quoting *State v. Tucker,* 28 Or App 29, 32, 558 P2d 1244 (1977), *rev den* 346 Or. 590, 214 P.3d 822, 2009. In other words, "the general words are not to be construed in their broadest sense, but are to be limited to conduct of the same kind or class" as the specific examples. *Hodges,* 40 Or App at 247. The rule rests on the proposition that "if the legislature had intended the general words of the enactment to be used in their unrestricted sense, the specific, particularized words would have been unnecessary." *Hodges,* 40 Or App at 247.

19 A hydraulic excavator is much quieter in that it eliminates the single largest source of noise in a steam shovel, that being the steam, and replaces it with essentially silent hydraulics, thereby making them dissimilar for the purposes of analysis of the noise they create.

based on the language at the beginning of WCC 8.24.040, which states that the "said enumeration shall not be deemed to be exclusive,* * * " This language is commonly found in noise ordinances, and has appeared as early as the 1950s. Despite considerable research, we are not aware of any case where a governmental entity attempted to use that language to broaden the scope of the enumerated acts to situations or activities not expressly listed. Doing so would most certainly violate due process. "A fundamental principle in our legal system is that laws which regulate persons or entities must give fair notice of conduct that is forbidden or required." *FCC v. Fox Television Stations, Inc*., 567 U.S. 239 132 S.Ct. 2307, 2317 (2012) (citing *Connally v. Gen. Constr. Co.,* 269 U.S. 385, 391, 46 S.Ct. 126 (1926)). The "requirement of clarity in regulation is essential to the protections provided by the Due Process Clause of the Fifth Amendment. It requires the invalidation of laws that are impermissibly vague." *Id*. (citation omitted); *Johnson v. United States*, 576 U.S. 591, 135 S.Ct. 2551, 2556 (2015). The Supreme Court has explained:

> Even when speech is not at issue, the void for vagueness doctrine addresses at least two connected but discrete due process concerns: first, that regulated parties should know what is required of them so they may act accordingly; second, precision and guidance are necessary so that those enforcing the law do not act in an arbitrary or discriminatory way.

Fox Television Stations, Inc., 132 S.Ct. at 2317 (citing *Grayned*, 408 U.S. at 108–09, 92 S.Ct. 2294); see *City of Chicago v. Morales*, 527 U.S. 41, 56, 119 S.Ct. 1849 (1999). Put another way, "[a] vague law impermissibly delegates basic policy matters to policemen, judges, and juries for resolution on an ad hoc and subjective basis, with the attendant dangers of arbitrary and discriminatory application." *Grayned,* 408 U.S. at 108–09, 92 S.Ct. 2294.

In light of these due process protections, the phrase "said enumeration shall not be deemed to be exclusive,* * * " is best understood as not prohibiting a non-enumerated activity from being subject to the "catch-all" provision in WCC 8.24.030. Any other reading simply does not pass constitutional muster.

In this regard, it is notable that although the list set forth in WCC 8.24.040 is derived from a Model Ordinance, the county did not see fit to adopt the Model Ordinance's prima facia violation language related to loading and unloading, nor did it adopt language related to commercial establishments. The Model code sets forth the following:

> *I. Loading or Unloading Merchandise, Materials, Equipment: The creation of unreasonably loud, raucous and excessive noise relating to the loading or unloading of any vehicle at a place of business or residence.*
>
> * * * * *.

> *M. Commercial Establishments Adjacent to Residential Property: Unreasonably loud and raucous noise from the premises of any commercial establishment, including any outdoor area which is part of or under control of the establishment, between the hours of 10 p.m. and 7 a.m. that is plainly audible at a distance of five feet from any residential property. [Cities with mixed-use buildings that include both commercial and residential establishments may consider an exemption from this prohibition or a separate prohibition that applies to those buildings.]*

It is also important to note that there are specific types of noises specifically exempted from the County Code and are outlined in Chapter 8.24.020. Generally, the noise ordinance does not apply to: forestry, farming practices, organized athletic activities, sounds caused by emergency or emergency equipment, sounds caused by regular vehicular traffic on public streets, sounds regulated by federal and state law, including sounds caused by railroads and aircraft, sounds from lawn, garden or household equipment associated with the normal repair or upkeep of property between the hours of 7 a.m. and 10 p.m. *See* WCC 8.24.020.

Mr. McClendon submitted a video entitled "Fence Beeping example" which shows the applicant using the telehandler to move equipment stored near the property line. Beyond that, however, back-up beepers are a "sound regulated by federal and state law" and are specifically excepted from the WCNO.

To close on the issue of noise, we wish to point out that Mr. McClendon misstates our position when he states that "Brown's lawyers admit that they have the right to work whenever they want as long as it's not active construction." Of course, that is not what I said. What I said was that none of the enumerated acts in WCC 8.24.040 apply to this case. That does not mean that the applicant has *carte blanche* to make as much noise as they want. To the contrary, we acknowledge that the "catch-all" prohibition on unreasonable noise applies, as do the DEQ standards. Under factor "L," the "time of day or night" when the noise occurs plays a role in determining reasonableness. Having said that, some "work" creates no noise. As an example, a Brown Contracting employee could pull an "all-nighter" writing spreadsheets on Excel to meet a contract bid deadline without violating the WCNO. However, power-washing a vehicle at 3am near the fence-line is most certainly going to a violation of the catch-all provision of the noise ordinance. Mr. McClendon clearly does not understand how the WCNO works, despite stating that it "isn't hard to interpret."

E. Vibration.

CDC 423-7 provides a development from creating "ground vibration" which is perceptible without the use of instruments. Ground vibrations are most often associated with heavy tracked vehicles and trains. Typical wheeled vehicles such as telehandlers and dump trucks typically do not create perceptible ground vibrations, especially when traveling on smooth surfaces.

The opponents claim to be affected by "vibration" but they never claim that such vibration is "ground vibration," as CDC 423-7 contemplates. Mr. Kerrie Standlee discusses Mr. McClendon's claim that his family feels vibrations on their property in his letter dated June 9, 2024, at p. 2-3. Mr. Standlee's professional opinion is that "the residents are experiencing low-frequency acoustic energy that is at a level considered acceptable under the DEQ noise control regulations." *Id*. at p. 3. Mr. Standlee has personally visited the site on numerous occasions, and based on those site visits, he provides expert opinion testimony that the equipment used on the Brown Contracting is not of the type that one would expect to emit ground vibration.

Mr. Standlee's opinion is consistent with my experience as well. Exhibit 38 provides documentation from a similar case from Clackamas County, in which the applicant, a log home builder, tested a dump-truck and a telehandler and found no perceptible ground vibrations. That test was conducted on a hard-dirt and gravel surface. Here, the applicant has paved all of the areas close to the McClendon property where vehicles operate, and therefore ground vibration would be expected to be much less.

In any event, the opponents do not provide any substantial evidence to support their claims. Given their tendency to exaggerate, the Hearings Officer should not give their unsupported testimony any weight.

F. Storage of Toxic or Noxious Materials.

Mr. McClendon alleges that Brown Contracting:

> "stores other types of fuel including gas and propane, and hazardous chemicals such as hydrochloric acid and sulfuric acid, among others, in dozens of 5-gallon buckets staged near our fence. These chemicals cause safety and fire concerns, especially since Brown is not connected to city water supplies and is fighting the request from Wilsonville to do so."

See Letter from Eric McClendon dated May 30, 2024, at p. 9. With the exception of the statement that the applicant opposes annexation to Wilsonville, everything stated above is false. As elaborated by Don Brown in Exhibit 39 (Declaration of Don Brown), the buckets are not "full of hazardous chemicals such as hydrochloric acid and sulfuric acid," as alleged by Mr. McClendon. Rather, "Brown Contracting uses 5-gallon buckets such as the ones shown in this photo for many different uses, such as storing tools; storing supplies such as grouts, cold patch, curing compounds, and others; and transferring and moving materials and supplies. On the day this photo was taken, we were temporarily stockpiling all our buckets, whether empty or filled with inventory and products, to reorganize, clean up, dispose of damaged or aged buckets, and subsequently place them back in our warehouse. Mr. McClendon seems to want to imply that these buckets are all full of dangerous substances, which is certainly not true." Exhibit 39. Additionally, Brown has coordinated with TVF&R and the Washington County Sheriff to

confirm that the site can be served in the event of an emergency, as demonstrated by the executed Service Provider Letters in the record.

III. Response to City of Wilsonville Comment Letters Submitted on May 30, 2024.

A. Objection to Proposed Conditions of Approval III(A)(1)-(5)).

County staff have indicated that they seek to condition the land use approval with certain land dedications requested by the City of Wilsonville. On the other hand, staff rejected the City of Wilsonville's demand that the applicant build the city transportation improvements needed to implement the Basalt Creek Concept Plan and the Coffee Creek Master Plan.

We object to the imposition of conditions requiring dedication or road improvements unless it is accompanied by a check from Washington County (or the City of Wilsonville) to cover the cost of construction and the Fair Market Value (FMV) of the property being taken for public use. Otherwise, such exactions raise constitutional concerns which have not yet been adequately addressed. *See Nollan v. California Coastal Comm'n,* 48 US 825, 831-32, 107 SCt 3141 (1987); *Dolan v. City of Tigard*, 512 US 374, 384, 114 SCt 2309 (1994); *San Diego Gas & Elec. Co. v. City of San Diego*, 101 S Ct 1287 (1981) ("After all, if a Policeman must understand the Constitution, then why not a planner?" J. Brennen, Dissenting).

The City of Wilsonville submitted proposed *Nollan / Dolan* findings on May 30, 2024. See Exhibit A to Letter from Ms. Amy Pepper, P.E. dated May 30, 2024. The city's analysis is deeply flawed and does not serve to sustain the county's burden of proof on this issue.

A. *Overview of Nollan &Dolan:* Nexus and Rough Proportionality Analysis.

Broadly speaking, *Nollan* and *Dolan* together establish a two-part test for assessing the constitutionality of a government exaction of a dedication of private property:

> "First, the exaction must substantially advance the same government interest that would furnish a valid ground for denial of the development permit-also known as the "essential nexus" prong of the test. *Nollan,* 483 US at 836-37, 107 SCt 3141. Second, the nature and extent of the exaction must be 'roughly proportional' to the effect of the proposed development. *Dolan,* 512 U.S. at 385, 114 S.Ct. 2309."

Brown v. City of Medford, 251 Or App 42, 51, 283 P3d 367 (2012). This "two-part test" is more accurately broken down into four separate analytical parts, which are discussed in detail below.

Before discussing those four parts, additional background warrants discission. The case of *Koontz v. St. Johns River Water Management Dist.*, 570 US 595, 133 SCt 2586 (2013) is critical to exaction law, since it substantially changed the legal landscape. *Koontz* clarified that:

(1) the *Nollan / Dolan* analysis applies to both permit denials as well as approvals, and (2) that monetary exactions are subject to the heightened scrutiny of *Nollan* and *Dolan.* As such*, Koontz* effectively eliminated two arguments commonly used by local governments to avoid the application of *Nollan / Dolan.* This is particularly relevant in this case, because at the hearing, the county transportation engineers stated that if the applicant opposed paying for their desired mitigation, that they would have to recommend denial of the application. Post-*Koontz*, that type of argument constitutes a violation of civil rights actionable under 42 USC 1983.

Further note that *Koontz* nullifies a substantial amount of prior case law, including cases such as *West Linn Corporate Park , LLC v. City of West Linn*, 349 Or 58, 240 P3d 29 (2010) and certain aspects of *Dudek v. Umatilla County*, 42 Or LUBA 427 (2002), *aff'd*, 187 Or App 504, 69 P3d 751 (2003), while breathing new life into other cases such as *Clark v. City of Albany,* 137 Or App 293, 904 P2d 185 (1995) (fast food restaurant site plan conditions requiring street improvements and the building of adjacent sidewalks were exactions subject to *Dolan*).

It is also important to note that the fact that a zoning code may legislatively require the improvements is immaterial to the *Nollan / Dolan* analysis. For example, in *Carver v. City of Salem,* 42 Or LUBA 305 (2002), *aff'd w/o op.,* 184 Or App 503 (2002), LUBA held that a landowner's choice to seek development in an area with inadequate public facilities, rather than wait an indefinite period of time until the city or another developer provides the missing facilities, does not constitute a voluntary waiver of the landowner's rights under the Takings Clause, or otherwise allow the city to impose an exaction of land to provide the missing facilities, without satisfying *Dolan's* rough proportionality test.

Similarly, in *Hill v. City of Portland*, 293 Or App 283 428 P3d 986 (2018), the City of Portland imposed a condition requiring the landowner to dedicate a two-to-seven-foot-wide right-of-way along the site's frontage along SE 122nd Avenue to accommodate future street improvements. The city defended this exaction by pointing out, correctly, that their Code standards demanded such exactions by creating road standards. The Court of Appeals held that this exaction was subject to the *Nollan / Dolan* test. The court found that the City of Portland could not sidestep *Nollan / Dolan* by merely legislatively incorporating the desired exactions into the Development Code:

> the city cannot evade *Nollan*'s requirement that it demonstrate that the impacts of a particular proposal "substantially impede" a legitimate governmental interest so as to permit the denial of a permit outright, simply by defining approval criteria that do not take into account a proposal's impacts. *See Koontz*, 570 US at 606-07 (rejecting notion that a government can evade the requirements of *Nollan* and *Dolan* through artful phrasing).

See also Sheetz v. County of El Dorado, 601 U.S. 267, 144 S.Ct. 893 (2024) (*Nollan / Dolan* applies to uniformly-applied legislatively enacted fees such as SDCs).

Both LUBA and Oregon Courts have held that a local government must either disregard or modify its own standards if that is the only way to avoid violating *Nollan* / *Dolan.* *See Dudek v. Umatilla County*, 42 Or LUBA 427 (2002), *aff'd*, 187 Or App 504, 69 P3d 751 (2003); *Gensman v. City of Tigard*, 29 Or LUBA 505, 515 (1995). *See also Lincoln City Chamber of Commerce v. City of Lincoln City*, 164 Or App 272, 991 P2d 1080 (1999) (The city may adopt rules that exceed "rough proportionality" for some land use applicants because city will apply rules only if they are "roughly proportional.").

With those ground rules in mind, we first discuss the requirements set forth in *Nollan.* The *Nollan* test can be broken down into three parts: the state interest requirement and two "nexus" considerations.

a. The "legitimate state interest" test.

When a governmental body requires an exaction of a property interest as a condition for approval of a development, the exaction will be considered a taking unless it substantially advances a legitimate state interest. *Nollan v. California Coastal Comm'n,* 483 US 825, 834, 107 SCt 3141 (1987). When the government conditions a land-use permit, it must identify a public problem or problems that the condition is designed to address. If the government can identify only a private problem, or no problem at all, the government lacks a "legitimate state interest" or "legitimate public purpose" in regulating the project. The Oregon Court of Appeals has described the state interest as one that would justify the denial of the development. *Brown*, 251 Or App at 56, 283 P3d 367. As authority for that prong, the *Nollan* court cited the now-overruled case, *Agins v. City of Tiburon*, 447 U.S. 255, 100 S.Ct. 2138 (1980), which concerned a facial regulatory takings challenge to the city's adoption of certain zoning ordinances rather than a permit condition. Nonetheless, regardless if this threshold test is part of the takings analysis or a separate due process test, it still provides the first hurdle for any government seeking to exact property in exchange of issuing land use entitlements.

b. The first "nexus" requirement: development for which a permit is sought creates or exacerbates the identified public problem.

Even assuming that an existing public problem exists, the government must show that the development for which a permit is sought will create or exacerbate the identified public problem. This is generally referred to as the first of two "nexus" issues.

The nexus test was established in *Nollan v. California Coastal Comm'n,* 48 US 825, 831-32, 107 SCt 3141 (1987). In 1982, Marilyn and Patrick Nollan wanted to convert their one-story beach bungalow into a two-story home. (See red arrow in photo to the right). The California Coastal Commission, the agency tasked with overseeing the state's coastline, agreed to grant the Nollans' building permit—but only if the Nollans consented to give away one-third of their property to the state to serve as a lateral beach access easement (shown with white arrows).

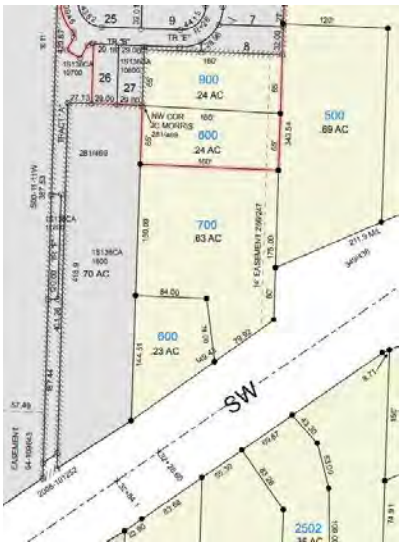
The California Coastal Commission said that the effect of construction of the house, along with other area development, would cumulatively "burden the public's ability to traverse to and along the shorefront." The Commission claimed that the Nollans' expanded home would create a "psychological barrier" to the ocean for passing motorists by partially blocking their view of the water. To alleviate the psychological barrier, the Commission said the Nollans needed to donate additional lateral access to the public beaches in the form of an easement across their property.

The US Supreme Court agreed with Mr. and Mrs. Nollan that the "remedy" (*i.e*. the "gift" of providing the government a beach easement) did not have any relationship to the stated "problem" created by the development (blocking the view of the ocean from the road). The Court held that compelling a property owner to donate land for a public purpose is legal only if the land sought to be taken has a direct connection to some harm caused by the development project. Obviously, no such connection existed in the Nollans' case.

Under *Nollan*, there must be a *nexus* between the development itself and the identified public problem; that necessary relationship will exist if the development creates or exacerbates the identified problem. The necessary relationship will not exist if the development will not adversely impact the identified public problem. This is sometimes referred to as the identification of an "impact" caused by the proposed development. Thus, even assuming there is a "public problem," the local government needs to show that the development will create or exacerbate the identified problem.

The Oregon Court of Appeals has provided practitioners with guidance on how to apply the nexus test. *See Hill v. City of Portland*, 293 Or App 283, 289-90, 428 P3d 986 (2018). In *Hill*, the Court of Appeals stated that the applicant's proposed development must "substantially impede" the interest identified by the government:

> [T]he first element of the *Nollan*/*Dolan* framework—the "nexus" element—requires the city to demonstrate "(1) what interests would allow the city to deny plaintiff's partition, and (2) how the exaction would serve those interests." *Brown*, 251 Or. App. At 56, 283 P.3d 367. In this context, as we understand *Nollan*, a governmental interest is one that would permit the denial of a permit when it is a legitimate one—such as managing traffic congestion—and the project's impacts standing alone, or in combination with the impacts of other construction, "would substantially impede" that legitimate interest. *Nollan*, 483 U.S. at 835-36, 107 S.Ct. 3141 (assuming without deciding that the government had identified legitimate governmental interests that would allow it "to deny the Nollans their permit outright if their new house (alone, or by reason of the cumulative impact produced in conjunction with other construction) would substantially impede these purposes"). That means, necessarily, that, to determine whether a government has established an interest that would permit the denial of a permit, the government must demonstrate how the proposed project's impacts, either alone or in combination with other construction, are ones that "substantially impede" the interest identified by the government.



The case of *Gensman v. City of Tigard*, 29 Or LUBA 505 (1995) provides a good example how a lack of increased impact precludes imposition of an exaction. In *Gensman,* the city approved a site plan for a Taco Bell restaurant located at 11635 SW Pacific Hwy in Tigard (T1S, R1W, Section 36DB, TL 700). The lot on which the restaurant was being sited contained a 14-foot-wide easement on its eastern side, which served two residences located to the north of the proposed restaurant, including a lot owned by the petitioner. The petitioner argued to LUBA that the city was required to force Taco Bell to increase the easement from 14 to 20 feet, because the code contained a provision that required the dedication of additional "right of way" at the time of development when existing ROW was "less than standard width." The city's definition of "right-of-way" was broad, and arguably covered the private easement at issue. However, the city correctly found that it could not apply this provision due to *Nollan* / *Dolan*, because the proposed development would not require any

increased access to petitioner's property. Thus, *Gensman* is cited for the proposition that it is unconstitutional to require land dedications when the government finds that the development causes no impact.

c. The second "nexus" requirement: the proposed solution has a tendency to solve or alleviate the identified problem.

Third, the government must show that its proposed condition or exaction (which in plain terms is just the government's proposed solution to the identified public problem) tends to solve, or at least to alleviate, the identified public problem. This is second aspect of the "nexus" issue: the government must show a relationship ("nexus") between the proposed solution and the identified problem, and such relationship cannot exist unless the proposed solution has a tendency to solve or alleviate the identified problem. As with negligence, a legitimate state interest "in the air, so to speak, will not do." *Palsgraf v. Long Island R.R. Co.,* 162 N.E. 99 (NY 1928). To meet *Nollan*'s "essential nexus" requirement, the state interest advanced by the exaction must be the same one that would be served by outright denial of the development. *Nollan,* 483 U.S. at 834-37, 107 S.Ct. at 3147-49.

d. *Dolan:* the rough proportionality test.

We turn to a discussion of the rough proportionality test. In *Dolan,* a landowner was attempting to obtain building permits to build a hardware store. The City of Tigard demanded that the landowner dedicate a bike path and greenway / floodplain easement to the city in exchange for the building permit. The United States Supreme Court struck down the building permit condition on the grounds that it violated the 5th and 14th Amendments. The court held that the government must show that the exaction it demands is "roughly proportional" to that part of the problem that is created or exacerbated by the landowner's development. The *Dolan* Court posed the question: "[W]hat is the required degree of connection

between [1] the exactions imposed by the city, and [2] the projected impacts of the proposed development."

The *Dolan* court concluded that the proposed hardware store would generate some additional traffic, and that a bike path was a potential solution to alleviate that problem because it provides an alternative means of transportation. However, the court concluded that any argument that the development "anticipated to generate additional vehicular traffic thereby increasing congestion" on nearby streets, was simply not "constitutionally sufficient to justify the conditions imposed by the city on petitioner's building permit."

Applying the "rough proportionality" test to the *Dolan* hardware store property, the United States Supreme Court concluded that the City of Tigard demanded too much to pass the test. Simply concluding that a bikeway easement could offset some of the traffic demand which the new hardware store would generate did not constitute sufficiently quantified findings for the taking of an easement. The Court stated:

> "[Although the Court has] no doubt that the City was correct in finding that the larger retail sales facility proposed by petitioner will increase traffic on the streets . . . the City has not met its burden of demonstrating that the additional number of vehicle and bicycle trips generated by the petitioner's development reasonably relate to the city's requirement for a dedication of the pedestrian/bicycle pathway easement. The City simply found that the creation of the pathway "could offset some of the traffic demand . . . and lessen the increase in traffic congestion . . . ." [T]he City must make some effort to quantify its findings . . . beyond the conclusory statement [quoted above].

Oregon case law provides some interesting examples of how the rough proportionality analysis is undertaken. In *McClure v. City of Springfield*, 39 Or LUBA 329 (2001), *aff'd,* 175 Or App 425, 28 P3d 1222 (2001), *rev denied*, 334 Or. 327 (2002), LUBA stated that a demand to *dedicate* (but not improve) 4,371s.f. of right-of-way was "roughly proportional" to the impact that 19 cars will have on a particular street corridor. The percentages worked out as follows: the impact of new development on the road was 1.83% of the total capacity of the road, whereas the exaction was 1.59% of total "trip load" on the corridor. *See* Exhibit 35. LUBA cautioned that "the quantification of impacts does not, in and of itself, establish that the extent of the proposed exaction is roughly proportional to the extent of the proposed impacts." *Id*. at 339. Ultimately, LUBA held

that the safety concerns and benefits to the property tipped the scales in favor of affirming the exaction in that case, though LUBA said it was a "very close question."

Another example is provided by *Schultz v. City of Grants Pass*, 131 Or App 220, 884 P2d 569 (1994). As LUBA described the result in *Schultz*: "the Court * * * appeared to consider a ratio of eight new vehicle trips per day to an exaction of 20,000 sf [of road dedication] to be manifestly unsupportable under *Dolan*." *McClure*, 39 Or LUBA at 231.

In *Art Piculell Group v. Clackamas County*, 142 Or App 327, 922 P2d 1227 (1996), the Oregon Court of Appeals again recognized *Dolan* as the standard for reviewing permit conditions. The court emphasized that the appropriate frame of reference is the impacts that the project will generate, and not the apportionment of costs for general improvements over all benefitted owners. Thus, the court held that LUBA correctly rejected the argument that as the project would produce 2.6% of traffic on the road, the developer should pay 2.6% of the costs of improvement. The court held that such mathematical "cost vs. use" comparisons were relevant but not determinative. However, the court refused to address how much mathematical precision is called for under rough proportionality test. Nonetheless, the court emphasized that development cannot have impacts that could warrant improvement conditions that are system-wide in scope.

The city discusses *Hallmark Inn & Resorts, Inc. v. City of Lake Oswego,* 193 Or App 24, 88 P3d 284 (2004) but that case presents a unique set of facts not present here. In *Hallmark*, the landowner sought to close a pedestrian accessway that the city had previously required of the landowner. The pathway allowed residents of a street to the west, Collins Way, to directly access the commercial shopping area to the east. It would also allow the employees of the landowner easy and direct access to Waluga park to the west. Without the pedestrian access, Hallmark's development would have impeded such pedestrian access. The court found that the necessary nexus and proportionality existed, because the benefit

to the landowner exceeded any detriment caused by the inability to exclude the public. Note, in this regard, that the city did not require a formal dedication of land, and nothing on the site indicates that the property is open to the public. The photos set forth below and in Exhibit 36 were taken in June of 2024, and reflect the current layout of the property.

Hallmark Inns and Resorts, Inc. v. City of Lake Oswego, 193 Or App 24 (2004).

B. Critique of the City of Wilsonville's Proposed *Nollan / Dolan* findings.

a. The City's Understanding of Takings Law is Incorrect.

The City of Wilsonville's proposed *Nollan / Dolan* findings reveal a distinct lack of understanding of takings law. As an initial matter, their analysis is incomplete. The city seeks to have the applicant build them a free travel lane, curb, planter strip, street trees, bike lane, sidewalk, and streetlights. Generally speaking, each of these items requires a separate *Nollan / Dolan* analysis. *McClure v. City of Springfield*, 39 Or LUBA 329 (2001), *aff'd,* 175 Or App 425, 28 P3d 1222 (2001) (requiring a separate analysis for three different exactions, as opposed to a blended analysis). However, the city makes no effort to explain, as an example, why the applicant's development creates a need for a streetlights, planter strips, street trees, or buffers. Instead, the city states that the focus of its *Nollan / Dolan* analysis is the travel lane and the bike lane.

Second, the city places foremost and overriding emphasis on the fact that it has enacted legislative standards in its Transportation System Plan (TSP) and Public Works Design Standards (PWDS) that require dedication of land and construction of public infrastructure to certain desired standards. As we noted in our May 30, 2024 submittal, the city does not explain why it

believes its TSP and PWDS apply to this case. This land use decision applies *county* standards, not city standards. ORS 215.416(8).

To make matters worse, the city submitted a copy of its *most recent* TSP, which apparently was enacted on May 1, 2024. Even if their TSP did somehow apply, it would be the version of the TSP that was in effect on the day the application was submitted that would be operative. ORS 215.427(3)(a). The city never explains why it thinks the *new* TSP applies.

In this case, the city is being very coy about its need to have Day Road widened to major arterial standards and Day Road's "Freight Route" designation. In its May 15, 2024 letter, the city identified the problem as a "level of service" deficiency in improvements. The city did not submit any evidence to suggest that a level of service deficiency exists. Level of service is typically determined by intersection capacity, and the city provided evidence that the two key intersections operate at acceptable levels of service. *See* Exhibit 40 (Delta Logistics Annex TIA, DKS, Feb 2022, at p.9).

The city also fails to comprehend that *Nollan*/*Dolan* applies even when the called-for exactions are required by legislation. The city views Euclidian zoning to be a defense to *Nollan*/*Dolan,* which makes no sense:

> The City requires any development and the related City facilities it utilizes to comply with the Wilsonville Code ("WC"), Wilsonville PW Standards, and Wilsonville's TSP. These are legislative enactments that apply broadly for connection to and use of City facilities. Unlike the financial responsibility component of the required improvements (discussed in Section VI below), these generally applicable standards are legislative policies of the City that are not subject to *Nollan/Dolan* analysis. The United States Supreme Court has explained that local governments have the right to set policies, such as establishing zoning regulations that limit areas where certain types of uses may be constructed, as well as the size, proximity, and materials and methods of construction, without violating a private property owner's constitutional protections against government regulation. *See Village of Euclid, Ohio v. Ambler Realty Co*., 272 US 365 (1926). (Underline Emphasis added).

See Exhibit A to letter from Amy Pepper, P.E. dated May 30, 2024, at p. 7. The above quote is a complete misstatement of the law which reflects zero understanding of the unconstitutional conditions doctrine.[20] *Koontz v. St. Johns River Water Management Dist.*, 570 US 595, 133 SCt

[20] The city even uses unique terminology that is unfamiliar to the seasoned practitioner. It seeks to draw some sort of distinction between a "financial responsibility component" and legislative standards which it contends are not

2586 (2013); *Sheetz v. County of El Dorado*, 601 U.S. 267, 144 S. Ct. 893 (2024); *Hill v. City of Portland*, 293 Or App 283, 289-90, 428 P3d 986 (2018).

For the city's education, we recap the basics. There are, generally speaking, four different types of taking:

1. A "physical occupation" taking: which is where the government seeks to occupy or invade private property, *Loretto v. Teleprompter Manhattan CATV Corp.,* 458 U.S. 419, 102 S.Ct. 3164 (1982);
2. A "regulatory" taking: a regulation that, on balance, imposes economic impacts that constitute a taking under the several factors identified in *Penn Central Transp. Co. v. New York City,* 438 U.S. 104, 98 S.Ct. 2646 (1978).
3. A "total" regulatory taking: a regulation that completely deprives a plaintiff of all economically beneficial use of property, *Lucas v. South Carolina Coastal Council,* 505 U.S. 1003, 112 S.Ct. 2886 (1992).
4. "Unconstitutional Conditions / Exactions" taking. A demand by a local government for a donation of land, public infrastructure or money in exchange for a permit. *See Nollan v. California Coastal Comm'n,* 48 U.S. 825, 831-32, 107 SCt 3141 (1987); *Dolan v. City of Tigard*, 512 U.S. 374, 384, 114 SCt 2309 (1994).

At its core, *Euclid* is a pure regulatory takings case. It says that the city and county can enact zoning regulations that limit the use of private property. That authority is not in question.

The exactions cases differ from pure regulatory takings cases because land use conditions requiring dedications of land and construction of public infrastructure are not mere *limitations* on the uses available to the permit applicant's property, but a requirement that the applicant give up property and/or money to the city in return for a development permit. Thus, exaction cases involve a special application of the "doctrine of "unconstitutional conditions," which provides that "the government may not require a person to give up a constitutional right – *i.e*. the right to receive just compensation when property is taken for a public use – in exchange for a discretionary benefit conferred by the government where the benefit has little or no relationship to the property." *Lingle v. Chevron USA, Inc.,* 544 U.S. 528, 125 S.Ct. 2074 (2005); *Dolan,* 512 U.S. at 385, 114 S.Ct. 2309 (1994). Thus, the unremarkable principle stated in *Euclid* that a local government can regulate the "size, proximity, and materials and methods of construction" has nothing to do with the issue of whether the city or county can force "some people alone to

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subject to *Nollan / Dolan*. We frankly could not follow the argument, and believe that it does not provide fair notice under *Boldt v. Clackamas County*, 107 Or App 619, 623, 813 P.2d 1078 (1991).

bear public burdens which, in all fairness and justice, should be borne by the public as a whole." *Armstrong v. United States*, 364 U.S. 40, 49 (1960).

Third, the city states that the takings analysis can consider any benefits that would accrue to the development from the exaction. While perhaps true, it is an odd statement to use in this case, given that the city never follows up by explaining <u>*what benefits*</u> accrue to Brown Contracting by dedicating an additional travel lane or a bike lane. To the contrary, the applicant uses Day Road for local access to its property. It gains no "benefit" from upgrading Day Road from two travel lanes to four travel lanes. *See* Exhibit 29 (Letter from Melissa Webb, P.E. Lancaster Mobley, dated June 7, 2024, at p. 1-5. If anything, the presence of four lanes is a detriment to Brown Contracting, because makes it harder and more dangerous to access Day Road. *Id*. There is no benefit to Brown in this case.

b. The City Has Not Identified a Legitimate State Interest.

As mentioned above, the Oregon Court of Appeals has described the state interest as one that would justify the denial of the development. *Brown*, 251 Or App at 56. The city cites to no standard in the Washington County Community Development Code that requires the applicant to dedicate an additional travel lane and bike lane. The city cites instead to its own TSP and codes, which of course do not apply.

This is not a case where an existing level of service deficiency exists. Day Road functions adequately at present, which all the key intersections functioning at level of service (LOS) B-C. Even though it does not apply, the city's standard is LOS D. The city does not claim otherwise. Rather, it simply points to the fact that it has designed Day Road as a major arterial and freight route. The city demands infrastructure needed to serve future industrial development, not the applicant's development. The city even admits that Brown Contracting is not part of the city's future vision for this area, but it still wants to steal Brown's property.

c. The City's Proposed Essential Nexus Findings are Flawed.

The city's essential nexus findings boil down to two arguments: (1) that the city has enacted legislative policies that require certain dedications of land and the construction of certain public transportation infrastructure to support the city's long term development goals for the planning area, and (2) the demanded exactions will "mitigate the impact of development at that location and the effects of the applicant's industrial development." *Id*. at p. 3-4.

With regard to the first point, the city seeks to have the county require costly developments for no other reason that the city's code requires it. The city may not establish an essential nexus simply by imposing a requirement for certain public improvements without connecting such a requirement to some impact caused by the project which triggers it. *Hill v. City of Portland*, 293 Or App 283 (2018). In *Hill*, the city identified a provision in its code that supported its governmental interest (traffic safety), but failed to demonstrate how advancing that valid interest established a "significant nexus" to the development request made of the applicant.

The Court in *Hill* explained that a local government "cannot evade *Nollan's* requirement that it demonstrate that the impacts of a particular proposal 'substantially impede' a legitimate governmental interest so as to permit the denial of a permit outright, simply by defining approval criteria that do not take into account a proposal's impacts." *Id.* at 290.

Here, the city does not adequately explain what exactly Brown Contracting's impacts are. At one point, the city argues that the applicant will create 23 pm peak hour trips on Day Road. *See* Exhibit A to Letter from Amy Pepper dated May 30, 2024, at p. 11. It is really only 22 pm peak trips, not 23, because one of these trips is associated with the residence. Beyond that, the city forgets that some portion of those 22 pm peak trips were approved in 2015, and the applicant did generously donate frontage to the city at that time in exchange for that permit. The city does not explain why the current proposal warrants additional dedications, nor does it give credit for the previous dedication.

The city argues that applicant "proposes industrial development utilizing freight and other vehicle traffic to travel to and from Wilsonville with convenient access to Interstate 5 ("I-5"). *See* Exhibit A to Letter from Amy Pepper dated May 30, 2024, at p. 11. This proposed finding is inadequate because it says nothing about why the applicant causes the need for a four-lane arterial. Of course, the applicant is very well served by the existing two-lane road with a center-lane, and does not need four lanes to meet its operational needs. There is no history of systemic safety problems at this location.[21] *See* Exhibit 29 (Letter from Melissa Webb, P.E. Lancaster Mobley, dated June 7, 2024, at p. 4-5.

The city further claims that the development "will also impact the intersections at SW Grahams Ferry Road and SW Boones Ferry Road (the two intersections along Day Road), and the North Wilsonville (Elligsen) I-5 interchange to the south." But that is just a pretext: the city does not quantify the impact to those intersections, and does not seek the applicant to provide mitigation to those intersections. Again, under *Nollan*, the sought after exaction has to remedy or help remedy the identified problem. Such a nexus is not present when the city seeks an extra travel lane on Day Road to remedy perceived capacity problems at distant intersections.

[21] The city seems to view "safety" as some sort of magic pixie dust that it can sprinkle on any set of facts in order to justify stealing private property. After all, nobody wants an "unsafe" situation to persist. However, the city presents no *evidence* of an existing safety problem, and no such problem is apparent on its face. *See* Exhibit 29 (Letter from Melissa Webb, P.E. Lancaster Mobley dated June 7, 2024.

The city states, in the very next sentence, that the "amount of traffic, particularly industrial freight traffic, documented in the DKS Memorandum (Attachment 3) needs improved roads for safe transportation." *Id.* at p. 11. This is no different than saying that a rattlesnake needs legs – it is simply not a factually supportable statement. Why exactly does the additional 80 +/- ADT that Brown Contracting seeks to generate cause the need for a major arterial with 4 travel lanes? The city suggests that a four-lane highway would be safer, but that is not true. One does not need to be a traffic engineer to understand that it less safe to try to access a four-lane arterial than it is to access a two-lane road. Nonetheless, our traffic engineer agrees. *See* Exhibit 29 (Letter from Melissa Webb, P.E. Lancaster Mobley dated June 7, 2024, at p. 5.

The real reason for the exaction is to facilitate future urban development unassociated with Brown Contracting. In its letter dated December 14, 2014, the City of Wilsonville's then-long Range Planning Director, Miranda Bateschell, candidly conceded that "Day Road is identified as a major arterial in the city's adopted TSP" and that "[a]dditional right-of-way is needed from this site in order to ensure ultimate buildout of the property can occur over time." So in 2014, the city did not state that it needed ROW to offset any impacts of the then-proposed contractor establishment development. Rather, the city was focused on "ultimate buildout" of the property, which is to say "future high-tech employment centers." In her more recent letter dated May 15, 2024, Ms. Bateschell now concedes that "[t]he industrial style use proposed by this applicant is <u>not</u> consistent with the Basalt Creek Concept Plan." (Emphasis in original). When combined, those two statements operate as a concession that the need for the additional travel lane and bike lanes are not related to the proposed development. The city is essentially saying that Brown Contracting is not welcome in the city, but that Brown Contracting needs to dedicate land and build roads to facilitate the city's future vision for this area. The fifth Amendment and Art I, Section 18 both prohibit such extortion.

In its newest proposed *Nollan / Dolan* findings, the city gives up on the "ultimate buildout" nexus justification, and instead focuses on a "safety" nexus justification.

The city complains that the applicant has too many access points. It further states that the applicant uses trucks with trailers, which require larger turning radii, take more time to complete a turn, and require to react to stopping and turning." *See* Exhibit A to Letter from Amy Pepper, at p. 12. The city then concludes:

> Given that: (1) the Development takes access from multiple driveways on Day Road; (2) the Development already exceeds the amount of trips it is allowed to generate; (3) Day Road is a 45 mph street; (4) other developments along Day Road are industrial uses that generate significant freight and vehicle traffic on Day Road;

> (5) Day Road is designated as a freight route and Major Arterial; and (6) Day Road's cross-section is currently deficient as a Major Arterial and freight route, the City has established an essential nexus between the Development and the required Day Road improvements.

Id. at p. 12. We address each of the city's six listed points in sequence.

1. It is true that the applicant seeks to use two driveways for the contractor establishment. However, as discussed below, there is no nexus between the asserted problem (too many driveways) and the city's proposed solution (build the city an additional travel lane and a bike lane). Furthermore, the applicant has shown that there are no safety problems arising from the current driveway situation because sight distance is met and no current problem is documented. *See* Exhibit 29 (Letter from Melissa Webb, P.E. Lancaster Mobley dated June 7, 2024, at p. 4-5.

2. It is true that Condition of Approval III of the 2014 application limits the approval to the "vehicles, equipment, and operation as outlined in the staff report." The staff report, in turn, makes a finding at page 2 that limits the vehicles to those described in the application. The applicant estimated that it would have a "minimum" of 52 ADT. Current operations are in the neighborhood of 136 ADT. However, the city makes no effort to explain why the additional 80+/- ADT creates the need for an additional travel lane and a bike lane. Nor is it objectively obvious on its face.

3. The city states - incorrectly - that speed limit is 45 mph[22], and uses that misstatement of "fact" as partial justification for the exaction. The actual speed limit signs posted on Day Road state that the speed limit is 40 mph. The 40-mph figure is used by their own consultant, DKS, in its various submittals.

4. The fact that other developments along Day Road are industrial uses that generate significant freight and vehicle traffic on Day Road has nothing to do with Brown Contracting or its operations.

5. It is true that Day Road is designated as a freight route and Major Arterial, but this was done prior to the time Brown Contracting started its operations, and represents a planning effort that has nothing to with Brown Contracting's operations. As mentioned repeatedly above, legislative pronouncements have no bearing on the nexus analysis because they are not tied to individual impact.

[22] The City's proposed findings confuse the design speed of a major arterial with the actual posted speed. The City of Wilsonville's Public Works Standards state, at page 66, that the "design speed" of an arterial is 45 mph. The city may achieve the design speed in the future, but for now, the actual posted speed is 40 mph.

6. Reason #6 is functionally no different than reason #5. The fact that Day Road's cross-section is currently deficient as a Major Arterial and freight route has no nexus to any problem created by Brown Contracting.

As we noted in our previous submittal, the Basalt Creek Transportation Refinement Plan Recommendations explain that roads in the Basalt Creek Planning Area need to be widened to handle regional growth outside of the Basalt Creek Planning Area:

> Planning Context. The need to plan for the future transportation system in the Basalt Creek area is driven not only by future growth in the Basalt Creek Planning area itself, but by future growth in surrounding areas targeted for industrial development. Basalt Creek currently lacks the multi-modal transportation facilities needed to support economic and urban-level development. Several planning efforts, summarized below, provide background and context for the Basalt Creek Transportation Refinement Plan:
>
> - The I-5/99W Connector Study recommended an alternative that spreads east-west traffic across three smaller arterials rather than a single expressway. Although specific alignments for these arterials were not defined, the eastern end of the Southern Arterial was generally located within the Basalt Creek Planning Area, south of Tonquin Road. The present planning effort aims to further define the location of the connection between the SW 124th Avenue Extension and the I-5/Elligsen interchange in a manner that does not preclude the future Southern Arterial west of SW 124th.
>
> * * * * *.
>
> - The Tonquin Employment Area, Southwest Tualatin Concept Planning Area, and Coffee Creek Planning Area together comprise about 1,000 acres surrounding the Basalt Creek area that are planned primarily for industrial use. These areas are expected to generate growing freight and work-related travel demands on the multi-modal transportation network that runs through the Basalt Creek area. (Emphasis Added).

Exhibit 5 at p. 1-2.

The city also trots out the tired old "cumulative impact" argument, but even the full development of every property on Day Road would still not justify the need for a four-lane arterial. The city does not argue to the contrary, preferring to argue in vague platitudes without substance.

The city cites to an obscure 1992 case entitled *Pengilly v. Multnomah County*, 810 F. Supp 1111 (D. Or. 1992) to support its "essential nexus" findings. *Pengilly* was decided when exactions law was still very undeveloped, and the case is no longer good law. For example, *Pengilly* relies on the "legislative enactment" justification, which has since been disapproved of. *See Koontz*, 570 US at 606-07 (rejecting notion that a government can evade the requirements of *Nollan* and *Dolan* through artful phrasing); *Carver v. City of Salem,* 42 Or LUBA 305 (2002), *aff'd w/o op.,* 184 Or App 503 (2002); *Hill v. City of Portland*, 293 Or App 283 428 P3d 986 (2018).

Furthermore, the *Pengilly* court states that the county did not have to prove that the government must explain why the proposed development either causes a government problem or makes it worse:

> Plaintiffs have cited no authority for their implicit argument that individual proposed developments must be shown to have deleterious impact before conditions can be imposed on them.

Id. at 1113. In this particular, the *Pengilly* court's reading of *Nollan* is simply incorrect. The lack of citation to *Pengilly* by other courts belies its weakness. But even to the extent that such a requirement was not clear enough in *Nollan*, that "authority" would come crystal clear two years later once SCOTUS decided *Dolan*: that case stands precisely for the proposition that developments must be shown to have deleterious impact on public facilities and/or services before conditions can be imposed on them. As the Oregon court of appeals said in *J.C. Reeves Corp,* 131 Or App at 618:

> "[*Dolan*] required considerable particularity in local government findings that are aimed at showing the relationship between a developmental condition and the impacts of development. * * *

Finally, even if it could somehow be argued that *Pengilly* was correctly decided, it is easily distinguishable on its facts. In the most critical passage of the entire case, the court recognizes the following:

> County further argues that its exaction requirement is directly tied to the impacts of new construction. McNamee Road is used primarily by residents living on properties adjacent to it, and each new residence has an incremental impact which, when combined with other, similar impacts, may require improvement of the road.

Id. So McNamee road is a local access road just like the one at issue in McClure. That is worlds apart from the situation in this case. Day Road is not primarily used by residents living on properties adjacent to it. Rather, as the city concedes, Day Road is a major arterial and freight route that is needed to provide regional mobility and allow for the development of thousands of acres of land in the various surrounding planning areas. The city may not force "some people

alone to bear" the "public burden" of building regional transportation infrastructure "which, in all fairness and justice, should be borne by the public as a whole." *Armstrong v. United States*, 364 U.S. 40, 49 (1960).

This fact causes the city's nexus findings to fail to meet U.S. Constitutional requirements set forth in *Nollan*. Recall that in *Nollan* held that a dedication of land for a beachfront pathway as a condition for receiving a residential building permit did not meet the essential nexus test because the government's need for beach access was not created by the proposed development. *Id*. at 838, 107 SCt 3141. Here, the city needs the land and improvements to serve its regional growth objectives, not to offset impacts created by the unfortunate landowner who happens to own property that stands in the way of the city's objectives.

For the reasons set forth above, the city fails to meet its burden of proof under *Nollan*.

C. The City's Proposed Rough Proportionality Findings are Flawed.

The city's scattershot approach to the rough proportionality analysis is also deeply flawed. The city's methodology seeks to compare the percentage of frontage that the applicant owns on Day Road in relation to total Day Road frontage, and then compare that number to a percentage of the current 2024 pm peak hour trips the applicant generates as compared to the total pm peak volumes of Day Road in 2021. The city concludes that the applicant:

- comprises 8.33% of the frontage on Day Road;
- comprises 20.83% of the driveways on Day Road,
- generates 2.05% of the PM Peak Hour trips currently using Day Road;

The city then states that that the applicant is only being ask to build 3.83% of the public infrastructure on Day Road. The city concludes:

> Applicant's responsibility of 3.8% of the improvements to Day Road is significantly less than Applicant's comparative frontage along Day Road (8.33%) and its proportional share of the access points along Day Road (currently, over 20%; prospectively, no less than 5%) and is roughly proportional to its PM peak hour trips.

What exactly that analysis is supposed to prove is unclear. None of the frontage data, driveway data, and PM peak hour data is relevant to the *Dolan* test. The city's methodology is simply not a comparison of the *impact* of the landowner's development and to the demanded *solution* of a public problem.

The City's analysis starts from the flawed - and frankly bizarre - premise that the percentage of frontage in relation to the total frontage is a relevant data point. The percentage of frontage a landowner owner possesses is simply not a relevant consideration, because owning road frontage is not an "impact" that makes it harder to solve the government "problem" at issue.

A person owning a flag lot with 50 feet of frontage could have just as much capacity (i.e. trip generation) "impact" on the road system as a person who owns 1000 feet of frontage. Even if the applicant owned the *entire* frontage on both sides of the entire length of Day Road, it would not somehow make it constitutional, in and of itself, to require the landowner to dedicate ROW or build *any* portion of Day Road. The city's analysis is ineptly circular, as it essentially states that owning property adjacent to a road justifies in and of itself the taking of some portion of that property for public use.

The city also counts the number of driveways owned by Brown Contracting (three residential and two commercial) and compares it to the total number of driveways on Day Road. This ratio (20.83% of the driveways on Day Road) has no relevance, and is simply a red herring. The city never attempts to explain why a percentage comparing the applicant's driveways to the total number of driveways on Day Road has any bearing on a *Nollan / Dolan* analysis. Even if the applicant was the only landowner that directly accessed Day Road, it would not make any land dedication exaction and any infrastructure demand any more justifiable.

Having said that, the *number* of driveways owned by Brown Contracting might have some relevance if the government had submitted evidence that the particular driveways at issue create a safety problem. Note that in *McClure* the city performed a "conflict point analysis" that showed that the two proposed driveways created an increased potential for crashes. Exhibit 35. Here, the city's proposed *Nollan / Dolan* findings do not take that approach or provide such data. Rather, the city simply states that the current driveways do not meet their spacing standards. *See* Exhibit A to Letter from Amy Pepper dated May 30, 2024, at p. 12. As we have previously pointed out, the *city's* spacing standards do not apply to this land use application. Moreover, a legislative enactment, in and of itself, does not justify an exaction. *See Koontz*, *Sheetz, Hill, supra,*

Note: The applicant submitted substantial evidence that the applicant meets the county's and AASHTO's sight distance standards. *See* Memorandum from Melissa A Webb, P.E. Lancaster Engineering dated May 30, 2024 (found at Exhibit 20 to the letter from Andrew H. Stamp dated May 30, 2024. *See also* Exhibit 29 attached hereto.

Furthermore, even if the applicant's driveways did, for sake of argument, somehow create a safety problem, the city's proposed solution does not help *solve* the problem. In addition to seeking to close access points, the city *also* seeks to have the applicant install another travel lane, curb, planter strip, street trees, bike lane, sidewalk, and streetlights. The city does not explain why adding additional travel lanes and bike lanes tends to solve safety problems created by excessive driveways. If anything, increasing the mobility of the arterial via additional travel lanes would tend to have to a deleterious effect on safety.

Finally, the city attempts to create a ratio between the applicant's trip generation and the existing levels of traffic:

> The City also examined the total PM peak hour trips of through traffic along SW Day Road to be 1,144, provided from a traffic study conducted for an industrial development across the street from the Development. *See* Attachment 4. Applicant's PM peak hour trips account for 23 of the trips. *See* Attachment 3. Thus, compared to other traffic, Applicant adds 2.05% trips on Day Road (1,144 – 23 = 1,121; 23/1121 x 100 = 2.05%).
>
> The cross-section of Day Road as a Major Arterial from face-of-curb to face-of-curb is 74 feet. The City is only requiring Applicant to construct 19 feet of the 74 feet along its frontage, and only requiring financial responsibility by Applicant of 17 feet. Thus, Applicant is only financially responsible for 3.83% of the Day Road cross-section (74 ft x 3,000 lf = 222,000 sf; 17 ft x 500 lf = 8,500 sf; 8,500/222,000 x 100 = 3.83%).

Id. at p. 13.

First, the amount of "existing" traffic on Day Road is not relevant because the city is not trying to remedy an *existing* capacity deficiency due to Day Road only being two lanes. Rather, the reason the city seeks to increase the capacity of Day Road from two lanes to four lanes is to increase regional mobility. Therefore, the correct metric is to compare the *design capacity* of the existing two-lane road to the design capacity of the proposed four-lane road. A typical four-lane arterial is designed to accommodate 36,800 ADT. As currently configured, the current two-lane road is designed to accommodate 14,000 ADT. *See* Exhibit 29 (Letter from Melissa Webb, P.E. Lancaster Mobley dated June 7, 2024, at p. 6. Assuming 1,144 pm peak hour trips representing 10% of total capacity, Day Road has no capacity issues at present.

Second, the use of "PM peak hour" trips as the measuring stick is incorrect. The pm peak hour capacity of Day Road is limited by the intersection capacity of the two intersections it connects, not by the number of lanes. The city does not demand that the applicant make intersection improvements; it seeks an additional travel lane. A much better benchmark for understanding the carrying capacity difference between a two-lane road and a four-lane road is "average daily trips" ("ADT"). The applicant's contractor establishment generates 136 ADT, a *minimum* of 52 trips of which were accounted for by the 2014 approval and associated dedication. So assuming that 84 ADT go beyond the 2015 land use approval, then the percentage increase ratio is 84 ADT ÷ 36,800 ADT x 100 = 0.23%.

Accordingly, assuming the city is correct in that it is seeking to have the applicant construct 3.86% of the road surface of Day Road, that amount is not even remotely proportional to the incremental trip generation increase (i.e. the capacity "impact" of the expansion of the contractor establishment). The fact that LUBA struggled with its *McClure* decision to conclude that 1.83% and 1.59% are roughly proportional - even going so far as to admit their decision was a close call - should give the county some reason to pause in this case. Here, city staff demands

both a land dedication, and further, that the applicant pay 100% of the cost of expanding the road to arterial standards – despite the fact that the applicant's proposed expansion adds only a few additional trips to the system. Day Road is planned to handle regional traffic, and the need for expansion to four travel lanes has nothing to do with the applicant's development. Staff's analysis does exactly what the court admonished the government from doing in *Art Piculell Group v. Clackamas County*, 142 Or App 327, 922 P2d 1227 (1996). Worse yet, unlike the ratios used in *Art Piculell Group,* the county can show no proportionality here, even if it uses a trip ratio method.

The applicant voluntarily dedicated 200 linear feet of additional ROW in 2015 for the initial site. The frontage of the expanded portion of the site is approximately 300 linear feet, and the total length of Day Road is approximately 8,850 linear feet. Thus, the applicant's expansion frontage is .033 of the total (roughly 3%). An arterial with four travel lanes will handle around 36,800 cars a day, so 3% of that total would be 1,080 cars. Our traffic engineer estimated that the Brown Contracting site should generate 136 ADT and that this number is not expected to change. I am going to assume that some of those trips go beyond what was approved in 2015. The 2015 decision does not create a formal trip cap. Even if we assume that half of the trips are "new" trips that were not permitted by the 2015 land use approval, there is no proportionality between the demanded ROW dedication exaction and the impact of the development.

Furthermore, the county should find no solace in the fact that city and county road standards set forth a requirement that streets be built to certain widths. The rough proportionality analysis applies regardless of the fact that the dedication requirement is expressed via legislation. In this case, it seems to be beyond any doubt that any county standards that require land dedications and public improvements to bring Day Road up to arterial standards must be waived or disregarded because they violate the U.S. Constitution as applies to the facts of this case.

III. Conclusion.

We trust that the county Hearings Officer will find this discussion to be helpful. We respectfully ask for an APPOVAL with no transportation dedications and no transportation infrastructure requirements. We also ask that the Hearings Officer reject conditions proposed by the opponents.

Sincerely,

VF-Law

/s/ *Andrew H. Stamp*

Andrew H. Stamp

AHS/nbro
Enclosure
cc: Client
AKS Engineering & Forestry, LLC

APPLICANT EXHIBIT LIST

May 15, 2024 Submittal:

Cover Letter
Exhibit 1 – Grading and Drainage of Brown Contracting Site (nb: inadvertently labeled on the cover letter as the Letter from Kerrie G. Standlee)
Exhibit 2 – Grading permit documents for Project No. P0205129 issued May 17, 2016
Exhibit 3 – Sewage treatment documents for County Record EHA16533 dated October 14, 2016
Exhibit 4 – Land development documents for Casefile No. 14-431 dated March 31, 2017
Exhibit 5 – Loudness and Annoyance of Disturbing Sounds – Perception by Normal Hearing Subjects, by Åsa Skagerstrand, Susanne Köbler & Stefan Stenfelt, International Journal of Audiology, published May 9, 2017
Exhibit 6 – Noise and Its Effects, by Dr. Alice H. Suter, submitted to the Administrative Confrence of the United States, November 1991
Exhibit 7 – Comprehensive Decibel Chart of Common Sound Sources, https://decibelpro.app/blog/decibel-chart-of-common-sound-sources/, last accessed May 14, 2024
Exhibit 8 – Tualatin Valley Fire & Rescue New Construction Fire Code Applications Guide for Commercial and Multi-Family Development, reviewed April 17, 2024
Exhibit 9 – Tualatin Valley Fire & Rescue Service Area map, last accessed May 14, 2024

May 29, 2024 Submittal:

Cover Letter
Exhibit 1 – Letter from Kerrie G. Standlee, P.E. with DSA Acoustical Engineers, Inc. dated May 14, 2024

May 30, 2024 Submittal:

Letter (starts on page 1 of the combined file)
Exhibit 1 (page 42) – Metro Ordinance 04.1040B
Exhibit 2 (page 121) – Basalt Creek Concept Plan and Technical Appendices
Exhibit 3 (page 173) – Washington County – Wilsonville Urban Planning Area Agreement
Exhibit 4 (page 186) – Wilsonville Ordinance 834
Exhibit 5 (page 238) – Basalt Creek Transportation Refinement Plan Recommendations
Exhibit 6 (page 248) – Coffee Creek Master Plan

Exhibit 7 (page 372) – Coffee Creek industrial Area infrastructure report
Exhibit 8 (page 435) – City of Wilsonville Resolution No. 2634
Exhibit 9 (page 464) – Transportation Development Tax Road Project List
Exhibit 10 (page 489) – Regional Transportation Plan Financially Constrained List of Projects
Exhibit 11 (page 490) – Metro 2018 Regional Transportation Plan Appendix R, I-5/99W Connector Study Recommendations
Exhibit 12 (page 504, duplicated at page 523) – Albertson Trucking Decision & Staff Report
Exhibit 13 (page 532) – Bernhardt Golf Notice of Decision
Exhibit 14 (page 556) – Clopton Excavating Notice of Decision
Exhibit 15 (Not included by staff) – Flying H Construction Notice of Decision
Exhibit 16 (page 565) – McCamant LLC Notice of Decision
Exhibit 17 (page 600) – Capital Improvement Plan – Stormwater Master Plan
Exhibit 18 (page 642) – AKS Engineering Preliminary Drainage Analysis & Stormwater Report
Exhibit 19 (page 763) – Soils Map & Data
Exhibit 20 (page 774) – Memorandum from Lancaster Mobley dated May 30, 2024
Exhibit 21 (page 790) – Washington County Sheriff Service Provider Letter
Exhibit 22 (page 793) – Pedestrian System Maps
Exhibit 23 (page 795) – excerpt from Determining Traffic Savety Improvements under the Traffic Impact Fee Ordinance: Process Documentation dated July 22, 1986
Exhibit 24 (page 865) – Site Images
Exhibit 25 (page 867) – City Coordination Area
Exhibit 26 (page 872) – Letter of Support from Ms. Patti Kief

<u>June 10, 2024 Submittal:</u>

Exhibit 27 – Discussion of Noise Citation issued by Deputy Kibble on December 19, 2022.
Exhibit 28 – June 9, 2024 Letter from Kerrie G. Standlee, P.E., DSA Acoustical Engineers, Inc.
Exhibit 29 – June 7, 2024 Memorandum from Melissa Webb, P.E., Lancaster Mobley.
Exhibit 30 – Exhibit clarifying the scope of the protective order in 22 CV 23711.
Exhibit 31 – Exhibits related to unlawful drone usage by Eric McClendon.
Exhibit 32 – Images of the pedestrian path at issue in *Dolan v. City of Tigard*.
Exhibit 33 – Article providing background on the case of *Sheetz v. County of El Dorado*.
Exhibit 34 – Tax Assessor's Map showing the property at issue in *Art Piculell Group v. Clackamas County.*
Exhibit 35 – Exhibits providing background on *McClure v. City of Springfield*.
Exhibit 36 – Tax Assessor's Map and photographs issue in *Hallmark inns and Resorts, Inc. v, City of Lake Oswego*.
Exhibit 37 – Google Earth Pro screenshot showing distance from fuel tank to property line.
Exhibit 38 – Ground Vibration study conducted in 2015 that led to a LUBA case entitled *Jacobs v. Clackamas County*.
Exhibit 39 – Declaration of Don Brown dated June 10, 2024
Exhibit 40 – Delta Logistics Annex, Traffic Impact Analysis, DKS, Feb. 2022.
Exhibit 41 – Aerial Images
Exhibit 42 – Footage of Brown Contracting Grounds on May 22, 2024 at around 4:40 AM

MEMORANDUM

Vial Fotheringham LLP
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email: Andrew.Stamp@vf-law.com

Date: July 1, 2023.

To: File

From: Andrew H. Stamp, Esq.

Re: Interpretation & Enforcement of Washington County Noise Ordinance

File: Brown Contracting, Inc. (P18379-001)

I. Facts.

Brown Contracting operates from an office located at 9675 SW Day Road, Sherwood OR 97140. Brown Contracting's property is located within the "Future Development 20" (FD-20) land use district. The FD-20 zoning district is an interim designation (*i.e.* a "holding zone") which is employed to maintain the status quo with regard to development until a Concept Plan for urban development is complete. The zoning anticipates that landowners will eventually annex their property to the City of Wilsonville, consistent with the Concept Plan jurisdictional boundary.

Although Brown Contracting recently applied for a new permit seeking expanded operations, it is currently operating pursuant to a 2015 Washington County Land Use Permit. Case File 14-431-D(IND). The 2015 permit defines the use as a "contractor's establishment." This term is not defined in the Washington County Community Development Code. Brown Contracting's application narrative stated that the proposed use involved storage of equipment, trucks, trailers, heavy machinery, and construction equipment. *Id.* Brown Contracting also stated it would use the property for storage of material such as rock, gravel, piping, and concrete products. Washington County did not impose any special restrictions related to noise on Brown Contracting's activities. The staff report and conditions only state that all development shall comply with the WCNO.

In or around March of 2019, Eric McClendon and his family purchased a home on the north side of the contractor's lot. This was four years after the County approved Brown Contracting's land use application. By that time, the scope of the contractor operations was in

full view to the McClendons. The McClendon family obviously does not enjoy residing next to a contractor establishment, and they have filed numerous complaints against Brown Contracting concerning a myriad of issues, including zoning, wetlands, air quality, tree cutting, and noise violations. With the exception of the tree cutting issue, the allegations have proven to be meritless. Even the tree cutting problem can be attributed to a lack of clear guidance in the County's laws.

Mr. McClendon filed one such noise complaint in June of 2022. On June 24, 2022, at 9:31am, Code Enforcement Officer Joseph Ramirez send an email to Don Brown entitled "Noise Complaint. The email states:

> Hello Mr. Brown,
>
> Thank you for speaking to me today regarding the noise complaint on the property. There is no violation of noise ordinance occurring. *Vehicles loading or unloading, being moved, or being washed is not a violation of ordinance and is considered normal noise for the vehicles.* I have closed out the complaint on the property. Feel free to contact me with any questions.

This email is consistent with a number of verbal conversations that Brown Contracting had with various WACO Code Enforcement staff. This email encapsulated Brown Contracting's understanding of their rights under the WCNO.

In December of 2022, Brown Contracting was fulfilling a contract that required them to perform nighttime road work at an off-site location on SW Canyon Road in Beaverton Oregon. To fulfill their obligations under the contract, the plan was to stage the crews from the Day Road Site.

In the early evening of December 11, 2022, employees of Brown Contracting were loading gravel into a dump truck at the Day Road Site in preparation of that night's tasks at the job site. The McClendon family called in a noise complaint, and WACO Sheriff Deputy Howell arrived on the scene. Deputy Howell issued a warning to the crew. In response to that incident, Brown Contracting immediately moved the gravel loading operations to a temporary site located a few miles away, and quit loading gravel from the Day Road site at night.

On Dec. 18, 2022, on or about 7:30 pm, four employees of Brown Contracting were loading a pick-up truck with two "buckets" which are used in conjunction with an excavator. This equipment was needed on the Beaverton job-site that evening. The events in question were captured by a security camera video. The video shows that the noise-creating operation (i.e loading the buckets using a telehandler) only lasted eight (8) minutes.

Deputy Kibble states in his incident report that he personally witnessed the employees making noise. According to Deputy Kibble, he witnessed the employees loading gravel into a dump truck using an excavator – the exact same activity that Deputy Howell had issued a warning for the week before. Deputy Kibble claims that after observing the problem, he parked his squad car "down the street" and then made a phone call to an on-duty sergeant, discussed

what he had observed and the ordinance. He states in his report that "the sergeant agreed with me this was a clear violation of county ordinance 8.24.030." He further wrote in his report that he returned to the site issue a citation, but by that time the workers were gone. As a result, he returned the next morning and cited Austin K. Owings under WCC 8.24.030 for a "noise ordinance violation." *Id.*

Deputy Kibble wrote the following incident report:

> **MENTIONED:**
>
> Deputy Howell (WCSO)
>
> **SUMMARY:**
>
> On 12/19/2022, I issued Austin Owing with Brown Contracting a noise ordinance violation citation. On 12/18/2022 at approximately 1945 hours, I observed members of Owing's construction crew using a large hydraulic excavator to load a dump truck. This report is for informational purposes only.
>
> **NARRATIVE:**
>
> On 12/18/2022 at approximately 1905 hours, I responded to a report of a noise complaint located at 9675 SW Day Rd., Sherwood in Washington County Oregon. Eric McClenden said there was semi-trucks and heavy equipment running and this had been an ongoing issue for the last couple weeks.
>
> Prior to arriving at the location, I reviewed the previous calls for service at the above location and learned Deputy Howell had been there a week prior, advised the foreman about the noise ordinance and gave them a warning.
>
> I arrived in the area at approximately 1945 hours and observed multiple large 10-12 yrd dump trucks running and a large hydraulic excavator loading one of the dump trucks with gravel inside the Brown Contracting yard. The equipment could be easily heard along with the gravel hitting the metal box of the dump truck. I'm very familiar with these types of heavy construction equipment after working in the industry for 23 years prior to entering law enforcement.
>
> I parked just down the street and made a phone call to an on-duty sergeant, discussed what I had observed and the ordinance. The sergeant agreed with me this was a clear violation of county ordinance 8.24.030. I returned to the address and the workers had left and the gate was locked.
>
> On 12/19/2022, I arrived at Brown Contracting and asked the receptionist for an onsite supervisor. Austin Owing came out from an office, and before I could explain why I was there, he asked if there had been another noise complaint. I explained there had been one the night before, I observed his employees working, they had been warned the previous weekend and I was issuing a citation for Sunday night's incident.

I issued Owing/Brown Contracting citation# 410204, explained the citation and the options on the back. I advised him about the noise ordinance and any further violation would also receive citations with an elevated cost. Owing said he understood and would talk to his employees and the owner, Donald Brown.

ACTION RECOMMENDED:

Not an offense.

ADDITIONAL INFORMATION:

My body worn camera was not activated on this call.

Deputy Kibble's trial testimony provided much more detail about this encounter – testimony that undermines his credibility. At trial, Deputy Kibble stated that he arrived on scene at 7:45pm, which he described as being "night" and "completely dark." *Id.* at 25. He testified that traveling east on Day Road with the window rolled down. *Id.* at 24. He stated that he slowed his vehicle down to "maybe five miles an hour" so that he could observe the site, but that his "pass time" was only "a few seconds." *Id.* at 25. He estimated the distance from his vehicle to the location of the noise at "50 yards." *Id*. at 10 He stated that he "saw a 10-12 yard dump truck which had its parking lights on. *Id.* at 8. He said he also saw an "approximately 28,000-pound excavator." *Id.* at 8, 45. He specifically testified that the heard "gravel dumping in a metal bucket." *Id*. at 27, 38, 42.

Although Brown Contracting, LLC did not get the opportunity to have witnesses testify at the trial, their employees were present and ready to testify that day. Paul Waller, who is a foreman, was in charge of the work crew that was tasked to work on the evening of Sunday, Dec 18, 2022 at the Beaverton site. He was prepared to testify they were going to using a compact excavator on the work site - a Takeuchi TB 260 known as Vehicle 141. Although Vehicle 141 was already on a trailer when they arrived at the Day Road site, they needed to bring two additional "buckets" for the job. Mr. Waller was going to testify that his crew used the JLG Industries forklift Telehandler to load the two buckets. This task occurred from approximately 7:30 to 7:38 pm, which includes the time it took him to re-park the telehandler.

Brown Contracting provided the County with a 25-minute video taken by a security camera located on the south side of the office building. The camera generally faces South. The video is an accurate depiction of the activities that occurred on site on the night of December 18, 2022, from 7:30 pm1 to a few minutes past the time Mr. Waller and his crew left the Day Road Site at 7:53 pm. The video evidence shows that the crew was not loading gravel into a dump truck, but instead was loading the two buckets into the trailer attached to a pick-up truck using a JLG telehandler. The key highlights from the video include:

- 7:31 pm PST (MC 0:04) (21:01:52) - Workers visible around JLG Industries Forklift Telehandler near the southern end of property (near Day Road).

[1] One unfortunately aspect of the video is that the minute counter is not calibrated correctly, so the actual time of the video must be established by reference to the GPS data provided by EROADS GPS Tracking System and Verizon Connect GPS tracking software

- 7:31 pm PST (MC 0:53) (21:02:43) – Telehandler lifts up first excavator bucket.
- 7:32 pm PST (MC 1:32) (21:03:21) - Telehandler further lifts up first excavator bucket, and moves toward a Dodge Ram pick-up truck (Vehicle 90).
- 7:33 pm PST (MC 2:52) (21:04:40) - Telehandler moves away from Dodge Ram pick-up truck, Telehandler seen with empty chains, workers visible surrounding telehandler.
- 7:35 pm PST (MC 3:58) (21:05:46) – Telehandler lifts a second excavator bucket and moves toward the Dodge Ram pick-up truck (Vehicle 90).
- 7:36 pm PST (MC 5:16) (21:06:54) – Telehandler is in the process of being returned to its parking location. Over the next 45 seconds +/-, visible empty chains are visible dandling from telehandler, indicating that the bucket has been released. Movement of telehandler ends at 7:37 pm PST (MC 6:05).
- 7:37 pm PST (MC 6:14) (21:08:02) – Telehandler lights turn off.
- 7:37 pm PST (MC 6:46) (21:08:34) - workers, some in reflective vests, circle up and begin a safety brief and receive convoy instructions.
- 7:48 pm PST (MC 17:58) (21:19:46) – Vehicle 116 "crew truck" comes into view from the right side of camera view. Its headlights are on. Movement stops at 18:05. Men disperse.
- 7:49 pm PST (MC 18:17) (21:20:05). Driver of Crew Truck (Vehicle 116) turns off headlights in order to prevent glare on neighboring residential property. The Crew Truck resumes movement under blackout conditions at 18:24, and exits the left camera view at 18:43.
- 7:50 pm PST (MC 19:00) (21:20:47) - Headlights of Dump Truck (Vehicle 102) turn on.
- 7:50 pm PST (MC 19:06) (21:20:53) Dump Truck (Vehicle 102) begins movement. GPS Tracking system records this movement as occurring at 7:50 pm PST)
- 7:50 pm PST (MC 19:13) (21:20:48) - Dodge Ram pick-up truck (Vehicle 90) back up lights turn on and vehicle begins to back up.
- 7:50 pm PST (MC 19:49) (21:21:36) - Dump truck (Vehicle 102) turns off headlights but continues to drive in the parking lot under blackout conditions.
- 7:50 pm PST 19:50 (21:21:40) - Dodge Ram pick-up truck (Vehicle 90) continues to back up, and this continues until 20:50.
- 7:51 pm PST 20:06 (21:21:54) – Dump truck (Vehicle 102) towing a trailer with Takeuchi TB 290 Compact Excavator (Vehicle 193) exits the camera's right view
- 7:51 pm PST 20:24 (21:22:12) – Dodge Ram pick-up truck (Vehicle 90) backs up with trailer. The Takeuchi TB 260 compact excavator (Vehicle 141) is visible in the top left corner of the camera view as it is illuminated by the Dodge Ram's (Vehicle 90) truck's headlight.
- 7:52 pm PST (MC 20:34) (21:22:21) – Excavator "bucket" visible loaded in the trailer towed the Dodge Ram pick-up truck (Vehicle 90).
- 7:52 pm PST (MC 20:44) (21:22:33) - At least one excavator "bucket" is visible in the trailer being towed the Dodge Ram pick-up truck (Vehicle 90) as the truck reverses.
- 7:52 pm PST (MC 20:51) (21:22:38) – Dodge Ram pick-up truck (Vehicle 90) begins forward movement. As it does so, it's headlights again illuminate the Takeuchi TB 260 compact excavator (Vehicle 141), which is stationary and not

being used.

- ❖ 7:53 pm PST (MC 21:03) (21:22:51) - Dodge Ram pick-up truck (Vehicle 90) stops to wait for other vehicles in the convoy. The excavator and bucket are no longer visible by MC 22:09 as it leaves the camera view to the left.

Deputy Kibble's report and testimony is factually incorrect in the following particulars:

a. There was only one dump truck being used that evening: Vehicle 102.
b. There was only one "large" hydraulic excavator on the site on the evening of December 18, 2022. It is known as Vehicle 119, and it is Link Belt 145 excavator (33,200 lbs). While Brown Contracting does use the LB 145 to load gravel into dump trucks at the Day Road site during work hours, it was not used that evening. The Verizon Connect GPS tracking software shows that the Link Belt 145 never ran on the night of Dec 18, 2022. the Link Belt 145 is the only excavator that could have been used to undertake the gravel-loading task, as the other two excavators are accounted for in the video.
c. Vehicle 141 is a Takeuchi TB 260 excavator. It is known as a "compact excavator," which, as the name suggests, is a small, portable design. At roughly 12,125 lbs, it is the smallest of the three excavators used at the Day Road site. Brown Contracting typically uses this excavator on job sites. Vehicle 141 can be seen in the security camera video; it is parked and does not move the entire time. *See* Video Minute counter 20:51 (stamped as "12-18-22 Sunday 21:22:38").
d. Vehicle 193 is a Takeuchi TB 290 excavator. It is known as a "compact excavator," which is also a small, portable design weighing roughly 18,000 lbs. This excavator was also on site at the time the Sheriff Deputy Kibble says he witnesses the unreasonable noise. This excavator was loaded on the back of Vehicle 102, which is Mitch Brissett's dump truck in the security camera video. See Video Minute Counter 19:40-20:05).

Officer Kibble's testimony that he "slow rolled" his vehicle to "five miles per hour" as he passed by the site is also inconsistent with the video evidence. The video does capture any slow-moving headlights. While it is possible that Deputy Kibble turned off his headlights prior to coming into view of the camera, he did not mention doing so, and such action would be unsafe and illegal in any event. The video demonstrates that Day Road is a very busy collector street: 151 cars travel past the site in 25 minutes, or approximately 6 cars per minute. The road creates a large amount of background noise.

Vehicle Summary

Sheriff Deputy T. Kibble drafted an incident report for the events that occurred on December 18, 2022. His testimony is as follows:

> I arrived in the area at approximately 1945 hours and observed multiple large 10-12yrd dump trucks running and a large hydraulic excavator loading one of the dump trucks with gravel inside the Brown Contracting yard. The equipment could be easily heard along with the gravel hitting the metal box of the dump truck. I'm very

> familiar with these types of heavy construction equipment after working in the industry for 23 years prior to entering law enforcement.

However, Sheriff Deputy T. Kibble understanding of the events that took place on the evening Dec. 18, 2022 are demonstrably incorrect. On or about 7:00 pm on that evening, four employees of Brown Contracting assembled at the Day Road Site in order to get the vehicles and equipment they needed to convoy to their jobsite in Beaverton. At approximately 7:45 pm, these four employees were loading a trailer being towed by a Dodge Ram 2500 pick-up truck with a "bucket." A bucket is a scoop which is used in conjunction with a backhoe. The four employees are part of a "crew" and are listed as follows:

- Paul Waller, foreman
- Milan Patterson, laborer
- Nation Bailey, laborer, grade checker
- Mitch Brissett, dump truck driver

As discussed below, the vehicles being used at the time of the incident include:

(1) JLG Industries, Inc. forklift telehandler
(2) Dump-truck (Vehicle 102) with Trailer towing Vehicle 193.
(3) Dodge Ram 5500 Flatbed "crew truck." (Vehicle 116)

1. Forklift Telehandler. The JLG Industries, Inc. forklift telehandler was being used at the time of the incident to load a bucket for the Takeuchi TB 290 excavator. Paul Waller operated the Telehandler that night. The video clearly shows the telehandler loading the bucket into a trailer at minute counter 1:32. The video shows the telehandler finishing the task at minute counter 7:09; empty chains can be seen dangling down from the forklift at that time. Soon thereafter, the telehandler is parked and is not seen moving gain in the video. Note that the telehandler does not have a GPS tracking device because it never leaves the site.

There were three excavators on site on the evening of December 18, 2022: Vehicle 119, 141, and 193. All three are discussed below.

2. Vehicle Number 119. Vehicle 119 is Link Belt 145 excavator. The client uses the LB 145 to load gravel into dump trucks at the Day Road site during work hours. Vehicle 119 is also transported to job sites where it is used for various excavation-related projects. The Verizon Connect GPS tracking software shows that the Link Belt 145 never ran on the night of Dec 18, 2022. the Link Belt 145 is the only excavator that could have been used to undertake the gravel-loading task, as the other two excavators are accounted for in the video.

3. Vehicle Number 141. Vehicle 141 is a Takeuchi TB 260 excavator. It is known as a "compact excavator," which, as the name suggests, is a small, portable design. It is the smallest of the three excavators used at the Day Road site. Brown Contracting typically uses this excavator on job sites. Vehicle 141 can be seen in the security camera video; it is parked and does not move. *See* Video Minute counter 20:51 (stamped as 12-18-22 Sunday 21:22:38).

4. Vehicle Number 193. Vehicle 193 is a Takeuchi TB 290 excavator. It is known as a "compact excavator," which, as the name suggests, is a small, portable design. This excavator was also on site

at the time the Sheriff Deputy T. Kibble says he witnesses the unreasonable noise. This excavator was loaded on the back of vehicle 102, which is Mitch Brissett's dump truck in the security camera video. See Video Minute Counter 19:40-20:05). The Verizon Connect GPS tracking system shows that it was not being used at the time that Officer Kibble said he witness an excavator being used on the site.

Other vehicles that are references in various GPS tracking software reports include:

5. Vehicle Number 101. This is a Dodge Ram 2500 Pick-up truck. The Verizon Connect GPS tracking software shows that this truck traveled between Wilsonville, Portland, and Candy on December 18, 2022. However, this vehicle did not enter the Day Road site on that day. Nation

6. Vehicle Number 116. This is Paul Waller's Dodge Ram 5500 Flatbed "crew truck." Nation Bailey was the driver of Vehicle 116 on the evening of December 18, 2022. According to the Verizon Connect GPS Tracking System, this vehicle started at 6:43 pm on Sunday, Dec 18, 2022, and was on site and running at the time Officer Kibble says that he heard the unreasonable noise. It is recorded as moving at 7:48 pm.

7. Vehicle Number 90. This is a Dodge Ram 2500 ¾ ton pick-up truck that at the time was being drivben by Paul Waller. It was on site at the time of the incident. In fact, Vehicle 90 towed the trailer containing the bucket. It can be seen in the video at minute counter 22:25 (backing up), through minute Counter 22:50. The bucket is clearly visible at minute counter 22:35 This vehicle had not been outfitted with a GPS tracking device.

8. Vehicle Number 174. This is a Dodge Ram pick-up truck- located in Eugene

9. Vehicle Number 198. This is a Dodge Ram pick-up truck – located in Eugene

10. Vehicle Number 57. This is a dump-truck. It was on site on Dec 18, 2022 but the EROADS GPS Tracking system recorded no activity on that day. On December 19, 2022, this dump truck traveled 132.23 miles.

11. Vehicle Number 102. This is a dump truck which was on site on the night of Dec 18, 2022. This dump truck was operated by Mitch Brissett on that evening. The Takeuchi TB 290 excavator. (Vehicle 193) was loaded on the back of Vehicle 102. The EROADS GPS Tracking System shows that he started the motor at 6:50pm, and that the engine idled until 7:50 pm, at which time the vehicle moved through the parking lot. Mr. Brissett left the Day Road Site at 7:53 pm. The GPS tracking system shows this truck running on Dec 19, 2022 from 12:31am to 3:58am. It returned to the Day Road Site at 3:58 am.

II. Overview of Applicable Law.

Noise – that is, the perception of unwanted sound – is inherently subjective; people can differ widely in their tolerance for varying volumes, tones, melody, or source of sound. However, this creates problems for lawmakers who are trying to craft noise ordinances. Under

the Fourteenth Amendment to the United States Constitution,[2] a noise ordinance generally raises two issues related to the "void for vagueness" doctrine.

First, a noise ordinance violates due process if it does not provide "fair warning," such that a "person of ordinary intelligence [has] a reasonable opportunity to know what is prohibited, so that he may act accordingly." *Grayned v. City of Rockford*, 408 U.S. 104, 108-09 (1972). Second, a noise ordinance violates due process if it is written so as to allow for arbitrary and discriminatory enforcement and that impermissibly delegates "basic policy matters to policemen, judges, and juries for resolution on an ad hoc and subjective basis."[3] *Id*. at 108.4

Many of the early noise ordinances made it a violation or crime to make noise that annoyed or disturbed other persons." Although courts sometimes found such ordinances facially valid, a majority of jurisdictions found then unconstitutional, particularly when subjected to "as applied" challenged. *Thelen v. State*, 526 S.E.2d 60, 61-62 (Ga. 2000) (finding a prohibition on

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[2] Similarly, Article I, Section 21, of the Oregon Constitution requires that criminal statutes "not be so vague as to permit a judge or jury to exercise uncontrolled discretion in punishing defendants, because this offends the principle against *ex post facto* laws." *State v. Graves*, 299 Or 189, 195 (1985). In *City of Portland v. Aziz*, 47 Or App 937, 615 P.2d 1109 (1980), the Oregon Supreme Court stated:

> "Due process requires that penal statutes provide an adequate basis for judicial determination of whether particular conduct is criminal. The statute must establish a standard for the trial court's decision whether to submit a case to the jury and it must provide a framework for the jury's determination of guilt or innocence. If the terms of a statute are so elastic that the determination of guilt or innocence in individual prosecutions must necessarily be ad hoc, the statute is unconstitutionally vague. *State v. Hodges,* 254 Or. 21, 25, 27-28, 457 P.2d 491 (1969); *State v. Sanderson*, 33 Or.App. 173, 176-77, 575 P.2d 1025 (1978).
>
> "A determination of whether a statute is void for vagueness necessarily involves questions of degree. The legislature need not define an offense with such exactitude that a person could determine in advance whether specific conduct in all possible factual circumstances will be found to be an offense. *State v. Samter*, 4 Or.App. 349, 352, 479 P.2d 237 (1971). The standard need not be so exact that persons affected by it will never be required to hazard their freedom upon a correct assessment of the manner in which a jury will resolve a question of degree. *State of Oregon v. Wojahn*, 204 Or. 84, 137, 282 P.2d 675 (1955). * * *." *State v. Williams,* 37 Or.App. 419, 422-23, 587 P.2d 1049 (1978).

[3] Overly vague penal laws also implicate Article I, Section 20, insomuch that giving "unbridled discretion to judges and jurors to decide what is prohibited in a given case" necessarily "results in the unequal application of criminal laws." *State v. Graves*, 299 Or 189, 195 (1985). "Some degree of ad hoc legislation by juries in finding defendants not guilty may be unavoidable and socially desirable to ease the edges of the criminal law, but the free-wheeling power to legislate so as to find a defendant guilty should not be institutionalized in a criminal statute." *State v. Hodges*, 254 Or. 21, 28 (1969). Although a statute need not define an offense so precisely that a person will automatically be able to determine in advance that specific conduct is prohibited, "a reasonable degree of certainty is required by Article I, sections 20 and 21." *Graves*, 299 Or. at 195.

[4] The Fourteenth Amendment's protection against vague laws applies to both criminal and civil laws. *See Chicago v. Morales*, 527 U.S. 41 (1999) (invalidating ordinance that imposed criminal sanctions as unconstitutionally vague); *Rowan v. Post Office Dept.,* 397 U.S. 728 (1970) (upholding civil statute against vagueness challenge).

sound that "either annoys, disturbs, injures, or endangers" others to be unconstitutionally vague); *Dupres v. City of Newport*, 978 F.Supp. 429, 433-34 (D.R.I. 1997) (collecting cases and finding that although a decibel-limit provision passed constitutional muster, others barring "any unreasonably loud, disturbing, or unnecessary noise," noise "detrimental to the life, health, or welfare of any individual," and noise that "annoys, disturbs, injures, or endangers the comfort, repose, peace, or safety of any individual" did not); *Tanner v. City of Virginia Beach*, 674 S.E.2d 848, 853 (Va. 2009) (holding that a provision prohibiting "unreasonably loud, disturbing and unnecessary noise" that is "detrimental to the life or health of persons of reasonable sensitivity" or that "disturb[s] or annoy[s] the quiet, comfort or repose.); *e.g., People v. New York Trap Rock Corp,* 57 N.Y.2d 371, 456 N.Y.S.2d 711, 442 N.E.2d 1222 (N.Y. 1982).

To address the problem of subjectivity, the Washington County Code only prohibits noise that is "unreasonable *to a person of normal sensitivity*." (Emphasis added). In this context, this phrase is intended to be an objective, reasonable person standard that the County hopes will save the ordinance from due process concerns over vagueness. The Ordinance also sets forth a list of eleven non-exclusive "factors" that are intended to guide the enforcement authority when deciding whether an interpretation has occurred. Note that the usage of the factors is mandatory: the factors "*shall be utilized* in determining whether a violation of the provisions of this chapter exists." Local governments who do not carefully document the use of the factors risk having the case dismissed for using unbridged discretion.

Ordinances using the "person of normal sensitivity" language have been met with mixed reviews by reviewing courts. Some courts have upheld these types of ordinances in the face of fact-specific "as applied" challenges. Those courts have described this as an "objective" standard that is not void for vagueness. Sample cases that have upheld similar ordinances as against various types of as-applied challenges include: *Munn v. City of Ocean Springs*, 763 F.3d 437, 440 (5th Cir. 2014); *State v. Holcombe*, 187 S.W.3d 496 (Tex. Crim. App. 2006), *cert. denied*, 127 S. Ct. 176 (U.S. 2006); *State v. Cornwell,* 776 N.E.2d 572, 574, 576 (Ohio App. 7th Dist. 2002); *Costello v. City of Burlington*, 632 F.3d 41, 44–46 (2d Cir. 2011); *Reeves v. McConn*, 631 F.2d 377, 385–86 (5th Cir. 1980); *People v. Frie*, 646 NYS2d 961(1996).

However, not all courts agree that the typical "catch-all" language in the Model Ordinance is constitutional. For example, in the case of *Tanner v. City of Virginia Beach,* 674 SE2d 848 (Va. 2009), *cert den*, 558 US 1147 (2010), the Virginia Supreme Court stated:

> The ordinance before us prohibits any "unreasonably loud, disturbing and unnecessary noise," noise of "such character, intensity and duration as to be detrimental to the life or health of persons of reasonable sensitivity," or noise that "disturb[s] or annoy[s] the quiet, comfort or repose of reasonable persons." The ordinance also describes various acts that constitute per se violations.
>
> We conclude that these provisions fail to give "fair notice" to citizens as required by the Due Process Clause, because the provisions do not contain ascertainable standards. * * *, Instead, the reach of these general descriptive terms depends in each case

> on the subjective tolerances, perceptions, and sensibilities of the listener.
>
> Noise that one person may consider "loud, disturbing and unnecessary" may not disturb the sensibilities of another listener. As employed in this context, such adjectives are inherently vague because they require persons of average intelligence to guess at the meaning of those words. *See Thelen,* 526 S.E.2d at 62; *Lutz v. City of Indianapolis,* 820 N.E.2d 766, 769 (Ind.Ct.App.2005); *Nichols,* 589 So.2d at 1283.
>
> The references in the ordinance to "reasonable persons," and to persons of "reasonable sensitivity," do not provide a degree of definiteness sufficient to save the ordinance from the present vagueness challenge. Such terms, considered in their context, delegate to a police officer the subjective determination whether persons whom the police officer considers to be of reasonable sensitivity would find the noise detrimental to their life or health. Likewise, these terms leave to a police officer the determination whether persons the police officer considers to be reasonable would be disturbed or annoyed in their comfort or repose by the particular noise at issue.
>
> Determinations of this nature invite arbitrary enforcement. Police officers likely will have differing perceptions regarding what levels of sound exceed the described tolerance levels and sensitivities of reasonable persons. Because these determinations required by the ordinance can only be made by police officers on a subjective basis, we hold that the language of the ordinance is impermissibly vague. *See Grayned,* 408 U.S. at 108–09, 92 S.Ct. 2294; U.S. *Labor Party v. Pomerleau,* 557 F.2d 410, 412 (4th Cir.1977); *Thelen*, 526 S.E.2d at 62. The imposition of criminal penalties for the violation of an ordinance cannot rest on the use of subjective standards, nor may an ordinance consign a person to penal consequences without first providing sufficiently definite notice of prohibited activities. *See Thelen*, 526 S.E.2d at 62; *Nichols*, 589 So.2d at 1284.

See also Nichols v. City of Gulfport, 589 So.2d 1280 (Miss. 1991); *Thelen v. State*, 526 S.E.2d 60, 61-62 (Ga. 2000); *Fratiello v. Mancuso*, 653 F.Supp. 775 (D.R.I.1987); *U.S. Labor Party v. Pomerleau*, 557 F.2d 410, 412 (4th Cir.1977); *Jim Crockett Promotion, Inc. v. City of Charlotte*, 706 F.2d 486 (4th Cir.1983); *Dupres v. City of Newport*, 978 F.Supp. 429, 433-34 (D.R.I. 1997); *United Pentecostal Church v. Steendam,* 51 Mich.App. 323, 214 N.W.2d 866, 867 (1974).

Admittedly, prior court cases are usually not dispositive in "as applied" challenges, because the fact that the law may have been applied in a constitutional manner in one case does not foreclose the fact that the law may be applied in an unconstitutional manner in other cases. *Grayned*, 408

US at 121, n50.

Furthermore, in all of the cases where noise violations / convictions were upheld, the violator was conducting themselves in a way that did not make the matter a particularly close call. For example, in the Harley Davidson motorcycle example, a reasonable person would perceive the propensity for straight pipes to create a noise that could unreasonably annoys persons in a noise sensitive unit.

Washington County has also enacted another constitutional safeguard found in the Model Ordinances. With regard to WCC 8.24.030(F), the term "plainly audible" is further defined, as follows:

> ***"Plainly audible" means any sound for which the information content of that sound is unambiguously communicated to the listener, such as, but not limited to, understandable spoken speech, comprehensible musical rhythms or vocal sounds.***

WCC 8.24.015. This language is an also an attempt to save the ordinance from due process concerns over vagueness, because it is telling police officers and enforcement officers to only cite violators in the most clear-cut of situations.

Indeed, in *City of Portland v. Aziz*, 47 Or App 937, 615 P.2d 1109 (1980), the Oregon Court of Appeals considered a regulation that made it unlawful to operate a sound production device between specified nighttime hours "so as to be plainly audible within any dwelling unit which [was] not the source of the sound." The court held this to be an adequately clear standard, even though application of the ordinance could vary based on factors such as the amount of insulation in a building. The court noted the "plainly audible" definition creates a high standard, since spoken speech need not only be audible, it must be "comprehensible" to violate the standard:

> While this definition is not a model of clarity, we find that it is not void for vagueness. Two of the examples of "sound for which the information content * * * is unambiguously communicated" are clear: "understandable spoken speech" and "comprehensible musical rhythms." As the defendant notes, the difficulty lies in reconciling the example of "understandable spoken speech" with "comprehension of whether a voice is raised or normal." However, as we read the ordinance, the examples are compatible. The second example, "whether a voice is raised or normal," applies in situations where volume is the only "information content;" for example, being able to tell that the amplified voice emanating from one's neighbor's television set is screaming.

Thus, the term "plainly audible" is intended to fill the gap between the subjective listener response of annoyance and the objective measure of sound levels. It provides the enforcing authority and the citizen with a criterion for evaluating how unreasonable a sound might be, and provides an enforcement officer a means for confirming a violation without sound level meter measurements.

Once last point is critical: ordinances that are *enforced* in a purely subjective manner is unconstitutional on an "as applied" basis, even if the law is capable of being applied in an objective and constitutional manner. *See Munn v. City of Ocean Springs,* 763 F3d 437 (5th Cir. 2014); *Graves*, 299 Or at 195 (Giving "unbridled discretion to judges and jurors to decide what is prohibited in a given case" necessarily "results in the unequal application of criminal laws."); *U.S. v. Reese*, 92 U.S. 214, (1875) ("It would certainly be dangerous if the legislature could set a net large enough to catch all possible offenders, and leave it to the courts to step inside and say who could be rightfully detained, and who should be set at large.").

III. Application of the Law to the Brown Contracting Case.

In light of the applicable law set forth above, the case against Brown Contracting had little change of succeeding. The County's case suffered from a number of critical vulnerabilities: the County did not:

- understand the standard;
- apply the eleven factors;
- make any observations from a "noise sensitive unit";
- understand what the "plainly audible" standard meant or how it is applied;
- correctly apply the "construction" standard.

As discussed below, the "catch all" provision of the noise ordinance would have been deemed by the court to be unconstitutionally vague as applied to Defendant's conduct because WCC 8.24.030's imprecise and subjective standards fail to provide "fair notice" as to what conduct by Brown Contracting was prohibited. As inartfully applied by Deputy Kibble, the WCNO created a significant risk of arbitrary enforcement.

Deputy Kibble testified that he was familiar with the WCNO, and that he had read it "multiple times." *Id.* at 21. At one point, he testified that he thought that he had received a "refresher" in "briefing training." *Id.* At yet, at the very moment when it counted the most, he felt compelled to "call his sergeant" and "go over it with him." *Id.* He attributed the need to do so "because [the WCNO] had been rewritten since the last time [he] read it." *Id*. at 11, 21. But that was simply not true: the WCNO was last amended in 2005. *See* Ord. 641 (2005). The truth of the matter is that he called the sergeant because he was not sure how exactly to apply the code. Of course, that ambiguity is the defining hallmark of an Ordinance that void for vagueness as applied to the particular situation. After all, the enforcement authority does not understand if a violation exists, how is the alleged violator supposed to know? The case against Brown Contracting was doomed based on that simple point alone: the officer needs to be absolutely sure that a violation exists, and should only cite violators in the most clear-cut situations.

In his trial testimony, Deputy Kibble stated: [t]he way I read the code, that there shouldn't be any noise on a Sunday, and especially not at 8:00 o'clock at night." Trans. p. 26-7; 37-8. Later in his testimony he equivocates by stating that "if they were just firing up equipment" such as "loading or leaving" then he would not have cited them. *Id.* at 39. To further confuse matters, he states that "[n]ow if we're sitting there, idling for long periods of time, that not needed.

That's going above and beyond loading up quickly to leave for a job on off hours." *Id*. While some of that discussion might be read as an application of factor J ("duration"), it would certainly have been the case that idling vehicles could not have been perceived in a noise sensitive unit located 700 feet away, let alone be "plainly audible." So Deputy Kibble's testimony makes clear that he really did not understand how to apply the WCNO. Again, how if Brown Contracting supposed to know what the standard is if the Sheriff does not know?

Furthermore, Deputy Kibble did not make any effort to apply the non-exclusive list of factors that were intended to guide his decision-making. He did not:

- ❖ know the difference between the "volume" and "intensity" of sound;
- ❖ know the zoning of the property;
- ❖ evaluate the volume or intensity of background noise;
- ❖ understand that the term "Plainly audible" is a defined term,
- ❖ stay around long enough to observe the duration of the noise;
- ❖ evaluate whether noise was recurrent, intermittent, or constant.

Each of these issues is discussed below.

The Noise Sensitive Unit Standard.

Deputy Kibble made no effort to evaluate the noise from the correct receptor location. Remarkably, Deputy Kibble testified that he made his observation from Day Road, and not from a "noise sensitive unit." *Id*. at 8, 29-30. However, the WCNO is absolutely clear as to where the noise is to be measured: from *inside* a "noise sensitive unit." The County never elicited any testimony on direct examination of the key witness as to whether the noise made by Brown Contracting. That was a prima facie element of the case, and Brown's expert testimony was that the noise made by the telehandler and idling vehicles could not be heard in a dwelling located 700 feet way. In fact, they could not be heard in a dwelling located 50 yards away unless the HVAC system was first turned off.

In fact, Deputy Kibble's testimony makes clear that he had no understanding of the term or even that it was defined in the WCNO. *Id*. at 29-30. Defense Counsel asked Deputy Kibble if "the location of a noise sensitive unit is relevant to a violation under which you cited Mr. Ownings?" *Id.* at 29. The obvious answer is yes, since it is the location from which the noise impact is measured. But Officer Kibble gave a confusing answer by stating that "[t]he noise sensitive unit, I believe, would be relevant in any noise violation if its within proximity." However, as discussed above, the application of the "catch all" provision is premised on the existence of a "noise sensitive unit" in relatively close proximity to the noise source.

The "Plainly Audible" Standard.

In this case, Deputy Kibble did not invoke WCC 8.24.030(F) when he cited Brown Contracting. As mentioned above, the term is defined in the WCNO and it intended to Although at one point Deputy Kibble correctly stated that in the case of music, that "plainly audible" meant that the receptor could "hear the words." By his own admission, he did not enter any noise sensitive units to evaluate the noise. In fact, Deputy Kibble mistakenly thought that he

was perceiving the sound of an excavator, not a telehandler. He stated that "[t]he equipment could be easily heard along with the gravel hitting the metal box of the dump truck." Besides being factually mistaken as to what he was hearing, he also misapplied the legal standard. Being "easily heard" is not the test; the test is whether a person of normal sensitivity located inside a noise sensitive unit would be unreasonably annoyed, disturbed, injured, by any noise made by a defendant. There are plenty of sounds that are "easily heard" that do not meet that standard. For example, the County's own Code Enforcement Officer that "[v]ehicles loading or unloading, being moved, or being washed is not a violation of ordinance and is considered normal noise for the vehicles."

The "Construction" Standard in WCNO 8.24.040 did not apply.

None of the "enumerated acts" were applicable to the facts of the Brown Contracting case. Nonetheless, two of the exceptions set forth in WCC 8.24.040 are worth mentioning. First, WCC 8.24.040(A) creates an exception for horns and other "signaling device on any * * * vehicle" when used as a "danger warning." However, this exception only applies "*on any street or public place in the county*." Here, the noise occurred on private property which is not open to the public, so any exception does not apply.

Second, WCC 8.24.040(F) also does not apply. Most notably, the acts committed by Brown Construction's crew, *i.e.,* the loading of vehicles in preparation of movement off site, is not an act of "construction." The word "construction" is not defined. WCC 1.04.030 is entitled "Interpretation of language" and states:

> *All words and phrases shall be construed according to the common and approved usage of the language, but technical words and phrases and such others as may have acquired a peculiar and appropriate meaning in the law shall be construed and understood according to such peculiar and appropriate meaning.*

Webster's Third New International Dictionary, Unabridged (2002) defines the term "construction" as follows:

> 2a. The act of putting parts to form a complete integrated object: Fabrication <during the ~ of a bridge>.

The complained upon activity does not constitute "construction." At most, it is staging activity for a business that engages in construction off-site.

As mentioned above, Deputy Kibble testified that "The way I read the code, that there shouldn't be any noise on a Sunday, and especially not at 8:00 o'clock at night." Trans. p. 26-27. The only section of the code that differentiates between Sundays and other days is the prohibition on "construction" set forth at WCNO 8.24.040(F). Ironically, Deputy Kibble did not even cite Austin Ownings under WCNO 8.24.040(F). Rather, the Defendant was cited for undertaking the exact same activity that they obtained a special use permit for: staging vehicles and equipment for travel to an offsite location. This is not a case where defendants were operating unusually

loud vehicles. Rather, they were using vehicles typically used in the trade, and even then, they were only doing so for a relatively short period of time.

Finally, it worth noting that even the County's Noise Complaint form hopelessly confuses legal concepts when it states:

> Washington County Code Chapter 8.24.030 states that it is unlawful for any person to make, continue or cause to be made or continued, any noise, which unreasonably annoys, disturbs, injures or endangers the comfort, repose, health, peace or safety of any person of normal sensitivity in a noise sensitive unit (dwelling). This prohibition generally applies between the hours of 10:00 p.m. and 7:00 a.m. Monday through Saturday, and all day on Sunday.

This statement confuses two different and independent provisions of the WCNO. The "catch all" provision at WCC 8.24.030 *applies at all hours of the day,* but one of the factors is intended to give the enforcement authority some discretion to apply the standard more strictly at night. In contrast, four separate and independent prohibitions in the "Enumerated Acts" provision set forth at WCC 8.24.040 relate to specific time periods.

June 9, 2024

DSA Acoustical Engineers, Inc.

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Attn: Andrew H. Stamp, Attorney at Law

From: DSA Acoustical Engineers, Inc.

Kerrie G. Standlee, P.E.
Principal

Re: Review of Written Comments Submitted into the Washington County Hearing Record by Opponents of the Brown Contracting Expansion Application
Project #: 102241

Introduction

DSA Acoustical Engineers, Inc. (DSA) was asked to review materials submitted into Washington County Casefile L2400001 Hearing Record during the second open-record period by opponents of the Brown Contracting, Inc. expansion application and provide a response to any noise-related comments considered inaccurate or incorrect. This document presents a brief presentation of the various noise-related comments made by expansion application opponents and DSA's response to those comments.

Comments Made by Eric McClendon

Mr. McClendon submitted a 9-page document with many comments concerning the impact of noise radiating to his home from the adjacent Brown Contracting, Inc. equipment and material storage site. The approximately first 3 pages of the document were spent laying out a history of complaints the McClendon's have had concerning noise radiating to their home from the Brown Contracting, Inc. site. The approximately 6 remaining pages of the document present a discussion of conditions that should be imposed in any permit granted to Brown Contracting, Inc. should the Hearings Officer decide to grant the permit.

DSA does not propose a response to any of the information presented in the first 3 pages of the document because those pages mainly describe Mr. McClendon's experience with the operations on the Brown Contracting, Inc. site. However, within the final six pages of Mr. McClendon's document, there are several places where noise-related comments need a response. To provide the responses, DSA will use the approach of first providing a number

for the comment made by Mr. McClendon, then listing the comment followed by a response to the comment. This approach will be used until all comments are addressed.

McClendon Comment #1: On the fifth page of Mr. McClendon's document, it states,

> ***As conceded by Brown, the noise ordinance is the applicable noise standard, not the DEQ standard.*** *Brown argues about the higher standard while conceding it does not apply. Although arguably less objective, the noise ordinance isn't hard to interpret.*

DSA Response to McClendon Comment #1:

As stated in DSA's May 14, 2024, letter to Mr. Andrew Stamp (submitted into the record during the 2nd open record period), the noise radiating from the Brown Contracting, Inc. equipment and material storage yard must comply with the Washington County Code WCC 8.24 and the Oregon Department of Environmental Quality (DEQ) Noise Control Regulations for Industry and Commerce (OAR 340-035-0035). So, contrary to what Mr. McClendon stated, the noise is regulated by both standards. As also stated in DSA's May 14, 2024, letter, the Washington County code is a subjective, non-enforceable code while the DEQ noise regulation is an objective code that is very enforceable. The DEQ noise regulation was promulgated in 1976 to "provide a coordinated state-wide program of noise control to protect the health, safety, and welfare of Oregon citizens from the hazards and deterioration of the quality of life imposed by excessive noise emissions." Given the fact the DEQ noise control regulation limits were adopted to basically achieve the same goal as the Washington County noise ordinance, it seems reasonable to conclude that meeting the DEQ noise limits would achieve the goals of the County's noise ordinance. As stated in the May 14, 2024, letter, based on the sound level data measured at the McClendon residence during the testing of various pieces of equipment used or stored at the Brown Contracting, Inc. yard, the noise radiating from the yard is likely in compliance during all hours at the McClendon residence.

McClendon Comment #2: On the sixth page of Mr. McClendon's document, it states,

> ***Brown admits they make noise.*** *Unlike the current 2014 permit which states that no noise or vibration will be felt on adjacent properties, this current application basically states that they have made, and will continue to make noise, but somehow "topography" will protect neighboring properties. As outlined by myself and other neighbors, we can currently feel vibration from heavy equipment. We can also hear construction noise. We cannot rely on "topography" to protect us from future development that has not occurred yet on lots even closer than the current operation.*

DSA Response to McClendon Comment #2:

In several instances, Mr. McClendon, and others, in oral statements at the hearing or in written statements submitted after the hearing, have referred to the fact that vibration can be felt coming from heavy equipment located in the contractor's yard. Normally, regulations that address vibration apply limitations to the amount of vibration that travels through the ground. For example, Washington County Community Development Code,

423-7 states, *"No development shall generate ground vibration which is perceptible by the Director beyond the property line of origin without use of instruments. Ground vibrations caused by motor vehicles, trains, aircraft, or temporary construction work are exempt from strict application of these standards, but good faith efforts to control such vibration shall be made by the originator."*

Normally, ground borne vibration is caused when the ground is impacted by a source with enough energy to cause the ground to undergo compression and refraction in the immediate vicinity of the impact similar to the way in which acoustic energy is generated and travels from a sound source through the atmosphere. For ground vibration to be generated, there first has to be an impact imparted to the ground of sufficient energy to cause the ground to transmit the energy. Relative to moving equipment causing ground vibration, we normally find that to be associated with either a heavy piece of equipment that has direct contact with the earth, such as a steel-tracked dozer or an earth-moving scraper or with a heavy tire supported vehicle that moves across an offset joint in the surface of a roadway at a speed that would not be found on the contractor yard site.

Neither of the two examples of vibration causing sources are found at the contractor yard site so it is highly unlikely that the vibration referred to by Mr. McClendon and others are a result of ground borne vibration. It has been my experience over the past almost 50 years of working as an acoustical engineer, that in most cases, people who experience vibrations within their homes that are actually experiencing vibrations that are a result of low frequency acoustic energy traveling from a sound source such as the engine of an idling truck or the engine of an airplane or helicopter flying over their home. In those instances, the acoustic energy is high enough within a certain frequency (but not high enough to cause a violation of the DEQ noise regulation limits) that it can cause windows and walls to vibrate enough to be perceptible if a person's hand is in contact with the surface. It could also be high enough that the energy is perceptible to the body due to the change in pressure around the body. However, that energy is in no way considered high enough to be a concern of harm to the body or to structures.

In conclusion, the fact that Mr. McClendon and others report feeling vibrational energy coming from the contractor's yard is not proof that operations at the contractor's yard is causing a violation of Washington County Community Development Code 423-7. It is more likely that the residents are experiencing low-frequency acoustic energy that is at a level considered acceptable under the DEQ noise control regulations.

McClendon Comment #3: On the seventh page of Mr. McClendon's document, it states:

> *Brown had a team of attorneys coordinate with walkie-talkies while they ran a dozen highly scripted "scenarios" multiple times until the desired reading was obtained. The study was also conducted over 125 feet from the fence, not 25 as represented by Mr. Stamp.*

DSA Response to McClendon Comment #3:

During the time sound level measurements were made at the McClendon residence, there were times when the measurement of sound radiating from an individual source had to be conducted a second time because ambient sound caused by aircraft overflights or accelerating truck noise radiating from trucks on Day Road and/or Grahams Ferry Road influenced the measurement level. Measurements were not redone simply because the sound radiating from the source of interest was not at the desired level as it appears is implied in Mr. McClendon's statement.

The sound level measurements were made 25 feet from the McClendon residence in the direction of the Brown Contracting yard and not at the property line as suggested by Mr. McClendon because both the Washington County noise ordinance and the Oregon DEQ noise control regulation are concerned with the sound at the residence, not at the property boundary. The DEQ noise control regulations state that the area considered noise sensitive within a noise sensitive property is that portion of the property located within 25 feet of the noise sensitive structure on the property or the property line, whichever location is further from the noise source. From questions I was asked by the McClendon's prior to the time measurements were made at their residence, it appears the McClendon's think every part of their property should be considered noise sensitive and not just the area in the immediate vicinity of the residence.

McClendon Comment #4: On the seventh page of the McClendon document, it states:

> ***The sound "study" left out the noisiest and worst vibration-causing machines and tools.*** *The "study" included zero cement trucks, volumetric trucks, tankers, impact wrenches or woodchippers. This is deceptive considering those machines are the cause of the most noise and vibration, hence the County's suggested limitation on the operation of these machines near the fence.*

DSA Response to McClendon Comment #4:

Contrary to what Mr. McClendon stated in his document, measurements were made at his home of the loudest pieces of equipment typically parked or used on the contractor yard site. Prior to conducting sound level measurements at the McClendon residence, in an effort to reduce the amount of time required to gather data at the McClendon residence, sound level measurements were made on the contractor's yard site to determine which sources could be eliminated from the measurement protocol at the residence. During those measurements, it was determined that the sound radiating from one of their older dump trucks was actually louder than the sound radiating from the concrete batch truck. Therefore, measurements were made at the McClendon using the dump truck as the source of interest since it would allow us to determine a worst-case scenario for multiple sources.

The sound radiating from a volumetric truck was not measured as Mr. McClendon stated due to the fact that we were told that type of truck is not parked at the site. Sound radiating from a woodchipper was also not measured at the McClendon residence because Brown Contracting representatives said the wood chipping operation was moved to another site in

response to complaints about the noise radiating from the chipper. Finally, a measurement of an "impact" wrench operating within the maintenance shop was made and the data was referred to in the data report as data from a "torque" wrench.

McClendon Comment #5: On the seventh page of the McClendon document, it states:

> ***The sound study tested each piece of machinery in isolation.*** *It is common for most of the noises cited in the "study" to occur simultaneously, especially during busy times. Testing in isolation created very misleading measurements.*

DSA Response to McClendon Comment #5:

Sound level measurements were made of individual pieces of equipment operating alone rather than a group of equipment operating simultaneously because having data for individual pieces of equipment would allow the calculation of various scenarios. In conducting a sound study, it is common to gather data for individual sound sources and then use that data to calculate the sound level that would be found at a receiver with various sound sources located at various positions on a site. This not only helps to reduce the length of time required to conduct sound measurements (the McClendon's agreed to allow the measurements at their home only if the measurements would not exceed a two-hour time period), but it allows for the development of many various scenarios.

The typical sound level analysis was used to determine if the sound level at the McClendon residence with various scenarios would comply with the DEQ noise regulations. The results of that analysis showed the sound levels at the McClendon residence would not exceed the DEQ limits for any equipment operating scenario on the Brown Contracting yard site.

McClendon Comment #6: On the seventh page of the McClendon document, it states:

> ***We have many decibel readings in the 60s, 70s 80s*** *(Dropbox Attachment). This shows once again how biased Brown's "study" was. I have provided a few examples for your review. As stated by Brown's attorney, anything over 55 is problematic, and we agree. Again, we can feel the vibration of heavy trucks from every room in the house. The noise and vibration are much greater than the "whisper from five feet away" described by Mr. Stamp.*

DSA Response to McClendon Comment #6:

The video submitted by Mr. McClendon to show the high sound levels found on his property was reviewed and several things were noted that should be mentioned. Firstly, it was noted that the sound level measurement was made approximately 10 to 15 feet from the property line rather than at or near the residence where both the County and State noise regulations apply. Secondly, it was noted that the sound level meter used by Mr. McClendon was a BAFX Products sound level meter, a meter which, based on the information available on-line from the manufacturer, may not meet the minimum

requirements for a sound level meter specified in the DEQ noise regulations. Given the approximately $54 price tag, it is highly likely it does not meet the requirements.

The third and most concerning item of note made from the video review was the fact that the sound level meter was set to measure the sound level on what is known as the "C" scale rather than the "A" scale, the scale referred to in both the County and State noise regulations. The "A" scale on a sound level meter has historically been used to measure sound because the frequency response of the measuring system more closely corresponds to how the human ear responds to sound. The "C" scale on a sound level meter was developed to allow the determination of how much lower frequency energy is present in the sound.

When listening to the sound recorded by the video camera showing the sound level meter, I noticed, based on what I was hearing, that the equipment being measured by Mr. McClendon was one of the "gator" units used to transport signs from the storage building located near the Brown Contracting north property line to trucks located at various points on the south end of the property. The gator was one of the quietest pieces of equipment measured by DSA at the McClendon residence. When the gator data measured at the McClendon residence was reviewed, it was found that there was approximately a 15 dB difference between the "A" weighted sound level and the "C" weighted sound level at the residence. Which means the sound measured by Mr. McClendon approximately 10 to 15 from the property line would likely have been in the range of 45 to 65 dBA, much lower than the 60 to 80 dB range reported by Mr. McClendon.

McClendon Comment #7: On the eighth page of the McClendon document, it states:

> ***Other than Brown Contracting, the area is relatively quiet.*** *Mr. Stamp argues that "background noise" and traffic are the true culprits here, along with the Amazon parking lot on SW Day and SW Boones Ferry. The truth is that the area is mostly large-lot residential, with a PGE substation in the distance that makes no noise. Amazon has installed a large earthen berm along their boundary with the neighborhood which protects us from noise and light. Brown is the only property causing unreasonable noise and vibration.*

DSA Response to McClendon Comment #7:

Contrary to Mr. McClendon's opinion (their home would be located in a quiet environment if the Brown Contracting yard was not present), ambient sound level data measured near the Brown Contracting north property line at various times during the week and on weekends, and at the McClendon residence during the equipment measurements show the acoustical environment at the residence is like that found at many other sites located near three major roadways. During the day, the ambient sound is heavily influenced by truck traffic on Day and Grahams Ferry Roads and fast flowing traffic on I-5. During late night periods, the ambient sound is influenced mainly by traffic on I-5.

An example of the influence of traffic on the ambient sound at the McClendon residence can be heard in the "May 29, 2024, revving from inside bedroom" video submitted into the

record by Mr. McClendon. The recording was intended to demonstrate how the sound of a truck located with an idling engine (although it is described as a revving engine) in the area between the maintenance shop and the storage building affects their home. However, if someone listens closely to the end of the recording, the sound of an accelerating truck off in the distance to the south can be heard over the sound of the parked idling truck still visible in the video. If the idling truck had not been present, the sound of the accelerating truck would have been more dominant and more obvious. And there are many more times during the day when accelerating trucks are present on Day Road than when a truck with an idling engine is present in the area between the maintenance shop and the storage building.

In addition to the more constantly present background sound caused by traffic on Day and Grahams Ferry Road, it is likely that the McClendon's, as well as other neighbors north of the McClendon's, have been receiving noise coming from operations on the Amazon vehicle parking site. From a conversation with a realtor who works with the owner of the Amazon property, it was learned that, for security purposes, Amazon had portable light units brought onto the site which included diesel generators on the light trailers. The portable lights were operated all night, so the generators were running all night. Recently the property owner had more permanent lights installed around the property so the portable lights could be removed.

In addition to the nighttime hour noise associated with the light plants on the Amazon site, the property owner continued to expand the Amazon parking area on the site by having dirt located in the northwest portion of the site either moved to other areas or moved off-site. On June 26, 2023, I observed an excavator operating in the northwest corner of the property used by Amazon and loading dirt into a dump truck. The attached two photographs show the excavator at its location. In addition to the excavator being shown in those photos, the excavator can be seen briefly in the latter part of the video submitted into the record by Mr. McClendon with the label, "Fence Beeping Example". It should be noted that the dirt pile in the video in the background behind the telehandler operation is where the excavator was operating when I witnessed it on June 26, 2023.

Mr. McClendon said that Amazon had constructed a berm along their north property line to block the sound radiating from the Amazon lot to residences to the north. It appears that Mr. McClendon may be referencing a berm that was constructed along the south side of the driveway that leads to three houses located on the property owned by the same property owner who owns the "Amazon" parking lot. In conversation with the realtor who works with the Amazon parking lot property owner, I was told that the berm, which only extends from a point approximately 40 feet west of Boones Ferry Road to a point approximately 165 feet west of Boones Ferry Road, was installed to visually block another part of the property located along Boones Ferry Road from the view of residences located immediately on Boones Ferry Road, and not to address any noise radiating from the Amazon parking area. And, given the shorth length of the berm, it is impossible for the berm to have any influence on the sound radiating from the area of the property utilized by Amazon operations to any residences located north of the property, especially to the McClendon residence.

McClendon Comment #8: On the eighth page of the McClendon document, it states:

> ***No Idling or revving vehicles that require a CDL north of their office building on 9675 SW Day. No release of air brakes in the same area.*** *This would end most noise and vibration concerns for us and neighboring residential property by confining the loudest activities to areas furthest away from residential neighbors. "Revving" is defined as "increase the running speed of (an engine) or the engine speed of (a vehicle) by pressing the accelerator, especially while the clutch is disengaged." Concrete trucks must rev their engines at a sustained rate for long periods of time to keep the roller moving and prevent the concrete from hardening. They frequently do this right on the fence line as they load, unload, wash, and service their concrete trucks. This revving and idling can last hours and is also accompanied by the constant release of air brakes. We can feel the vibration from our living room, bedroom, children's rooms, etc.*

DSA Response to McClendon Comment #8:

It appears Mr. McClendon provided the above comment because he thinks concrete batching is occurring on the Brown Contracting site. I have worked on many projects involving the control of noise radiating from concrete batch plants and I can state that, at no time have I seen any equipment located on the Brown Contracting site that would allow concrete batching to occur on the site. Concrete batching occurs at a plant where sand, gravel and cement are brought together through conveyor systems and delivered to the concrete truck along with water. As Mr. McClendon states, the concrete truck has to have the drum rotating at a high speed to mix the components and then keep the drum rotating at a slow speed once the mixing is complete during the time the concrete mix is delivered to its final destination.

Mr. McClendon submitted a video into the record, showing a concrete truck backed into the area between the maintenance shop building and the storage building. The video is labeled "September 19, 2022, 613 AM revving in unscreened area". The video actually shows the concrete truck with an idling engine, and it appears that the drum is not turning on the truck, which is not surprising since there is likely nothing in the drum, given the fact that concrete batching does not occur at the site. It is more likely that the truck was parked at the location after some maintenance work late in the day on the previous day and the engine was started to prepare the truck for leaving the site when the video was taken. While I cannot speak to the length of time the truck was left running in the video taken by Mr. McClendon, I can state that, when a diesel truck is first started in the morning, there must be enough time for the engine to warm up and build up pressure in the air tank used to operate the air brake system. Contrary to what many people think, air pressure brake systems operate in a way in which the air system is used to push back against a large spring that wants to push the brake pads against the wheel drum rather than push the brake pads against the wheel drum. Consequently, there must be enough air pressure in the system to release the brake after it has been set for the night.

In addition to discussing the sound of the idling engine, Mr. McClendon commented on the constant release of air brakes while the trucks are parked near the Brown Contracting north

property line. What Mr. McClendon is experiencing is the sound of the pressure regulating valve associated with the brake system, not the constant application of the brakes. Rather than require that trucks not be allowed to operate in that area, it might be more reasonable to require that air release suppression equipment be installed on any trucks that will be parked overnight in the area between the maintenance shop and storage buildings and started before a specified time of the morning.

Finally, it should be noted that the video taken by Mr. McClendon was taken from a location that is not an area of concern for either the County or State noise regulations. If there is a concern with the amount of sound radiating to the residence around the end of the sound wall located on the Brown Contracting site, that wall could be extended further east to further reduce that sound.

DSA comments about all videos submitted into the record by Mr. McClendon:

It was noted that most of the videos submitted into the record were take on the McClendon property at locations not in the immediate vicinity of the residence. As stated earlier, both the County and State noise regulations address the noise in the vicinity of the residence rather than at locations far removed from the residence. Therefore, I recommend drawing that fact to the attention of the Hearings Officer.

In addition to the video locations issue, I would ensure that the Hearings Officer is aware that the audio portions of all the videos submitted into the record cannot be used as demonstrating the level of sound that is being heard at the recording location. Video recorders typically have an auto-adjust feature that amplifies the incoming audio signal to the point to where it can be recorded and be audible during playback. And to compound the issue, not all frequencies are amplified by the same amount. Thus, recordings such as those submitted into the record would not be allowed as evidence in a court of law because the playback level cannot be guaranteed to be at the level actually experienced in the field. I have been involved in legal cases during my almost 50-year career where it was required that steps be taken at a hearing to adjust the output from a recorded signal to account for the room effect as well as to ensure the sound level at the listener of interest (the judge or jury) was at the level observed in the field. The Hearings Officer should be made aware that the videos should be considered only to demonstrate the type of sound that radiates from the Brown Contracting site, but it does not accurately demonstrate the level of that sound.

Comments Made by Ms. Jackie Mathys

On the 1st page of Ms. Mathys' submitted written document, it states:

> *Our house, just left of the house in the photo (last page) with the red roof, along with the houses to the left of us, are situated at the top of a canyon.*
>
> *The canyon below us acts as a natural amplifier for noise generated from the direction of the Brown property. The equipment noise from the Brown site impacts us significantly, and we hear the noises loudly and clearly.*

Additionally, we've had a preview of what increased heavy equipment noise will sound like due to the construction of a substation by PGE on Day Road, just west of the lots acquired by Brown. Over the past few months, we have endured the sounds of dump trucks, backup beeping, and other heavy equipment. The loudest and most noticeable noise comes from dump trucks dumping and their gates slamming shut, which is amplified up to our house and our neighbors to the north due to the canyon's acoustics.

DSA Response to Ms. Mathys' Comment:

Ms. Mathys appears to have included the term "canyon" in her comment to try to influence the Hearing Officer's perception of the way that sound travels to her residence from the Brown Contracting site. Typically, the "canyon" effect is referred when there is a narrow distance between two, hard vertical surfaces such as would be found in a downtown area where tall buildings are on each side of a street, or in a river canyon where the elevation at the top of the banks on both sides of the river are similar and the banks are separated by no more than 500 to 600 feet. In the case of the conditions in the vicinity of the Mathy's residence, the topography at the residence drops down quickly to the west elevation at the wetlands, but the topography on the west side of the wetland rises more gradually and does not reach the elevation of that found at the residence at any point for more than a mile southwest of the house, more than a mile due west of the residence, and almost 1500 feet in a direction northwest of the residence. So, given the large distances between adjacent surfaces that could be considered to form a canyon, the topography at the Mathys' residence, in the direction of the Brown Contracting site would be considered a wide valley.

With a wide valley, people located on the high side of a valley can experience sound levels that would be higher than would be expected if the terrain between the source and receiver was flat. This is mainly due to the fact that there is less ground reduction between a source located at a lower elevation and the receiver located at a higher elevation when there is direct acoustic line-of-sight. If there is not a direct acoustic line-of-sight between the source and receiver, the elevation difference may not make a difference due to the effects of other factors (natural barriers from topography between sources on the Brown Contracting site and the receiver or the presence of vegetation such as trees between the sources and receiver). It has not been established if there is direct line-of-sight between the Mathys' residence and the proposed Brown Contracting expansion area, but, even with the potential reduced ground reduction between the Brown Contracting site and the Mathys' residence, given the distance between the two (almost 900 feet), it can be concluded that the sound reaching the Mathy's residence will be in compliance with both the DEQ the daytime hour and nighttime hour noise control regulation limits.

Conclusion

Based on the results of the noise study conducted for the proposed Brown Contracting expansion area, the noise radiating from the area will be in compliance with the DEQ noise control regulations.

DSA Acoustical Engineers, Inc.
Phone: 503-516-4298
Email: stanhartk@comcast.net

Excavator Operating on Amazon Parking Lot Property

DESIGNED BY:	DRAWN BY:	DATE:	PROJECT NO.	
kgs	kgs	6/9/2024	102241	Figure 1

DSA Acoustical Engineers, Inc.
Phone: 503-516-4298
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Excavator Operating on Amazon Parking Lot Property

DESIGNED BY:	DRAWN BY:	DATE:	PROJECT NO.	
kgs	kgs	6/9/2024	102241	Figure 2

lancaster mobley

1130 SW Morrison St., Suite 318
Portland, OR 97205
503.248.0313
lancastermobley.com

Memorandum

To: **Sean Emrick, Brown Contracting**

Copy: **Marie Holladay, AKS Engineering & Forestry**

From: **Melissa Webb, PE**

Date: **June 7, 2024**

Subject: **Brown Contracting, Inc – Third Open Record Period Submission**

Introduction

This memorandum is written in response to comments received from the City of Wilsonville in a memorandum dated May 30, 2024, regarding the Brown Contracting establishment expansion (Washington County Case File No. L2400001-D(IND)).

City staff have raised a concern about safety along SW Day Road due to the amount of traffic related to the Brown Contracting establishment. Specifically, the City notes that "the amount of traffic, particularly industrial freight traffic, documented in the DKS memorandum,[1] needs improved roads for safe transportation."[2] In their memorandum, the City also notes that "when discussing vehicle trips… and safety concerns at specific intersections, the City places particular emphasis on safety considerations with freight trips utilizing and turning onto/off of Day Road" (p 12).

This memorandum will address the following safety aspects along SW Day Road, particularly with respect to freight trips:

1. An analysis of the most recent five years of crash data at the site access intersections.
2. Review of sight distance standards and measurements for single-unit trucks at site access intersections.
3. An analysis of the current Average Daily Traffic (ADT) along SW Day Road.

Crash History Review– Site Access Intersections

Using data obtained from ODOT's Crash Data System, a review of five years of the most recent available crash history (January 2018 through December 2022) was performed at the five site access driveways owned by the Brown Contracting establishment. Figure 1 shows the locations of the access driveways, marked with yellow circles.

[1] DKS Associates, *Brown Contracting – Traffic Impact Study Criteria Technical Memorandum*, May 9, 2024.

[2] City of Wilsonville, *Memorandum RE: Washington County Case File No. L2400001-D(IND)*, page 11.

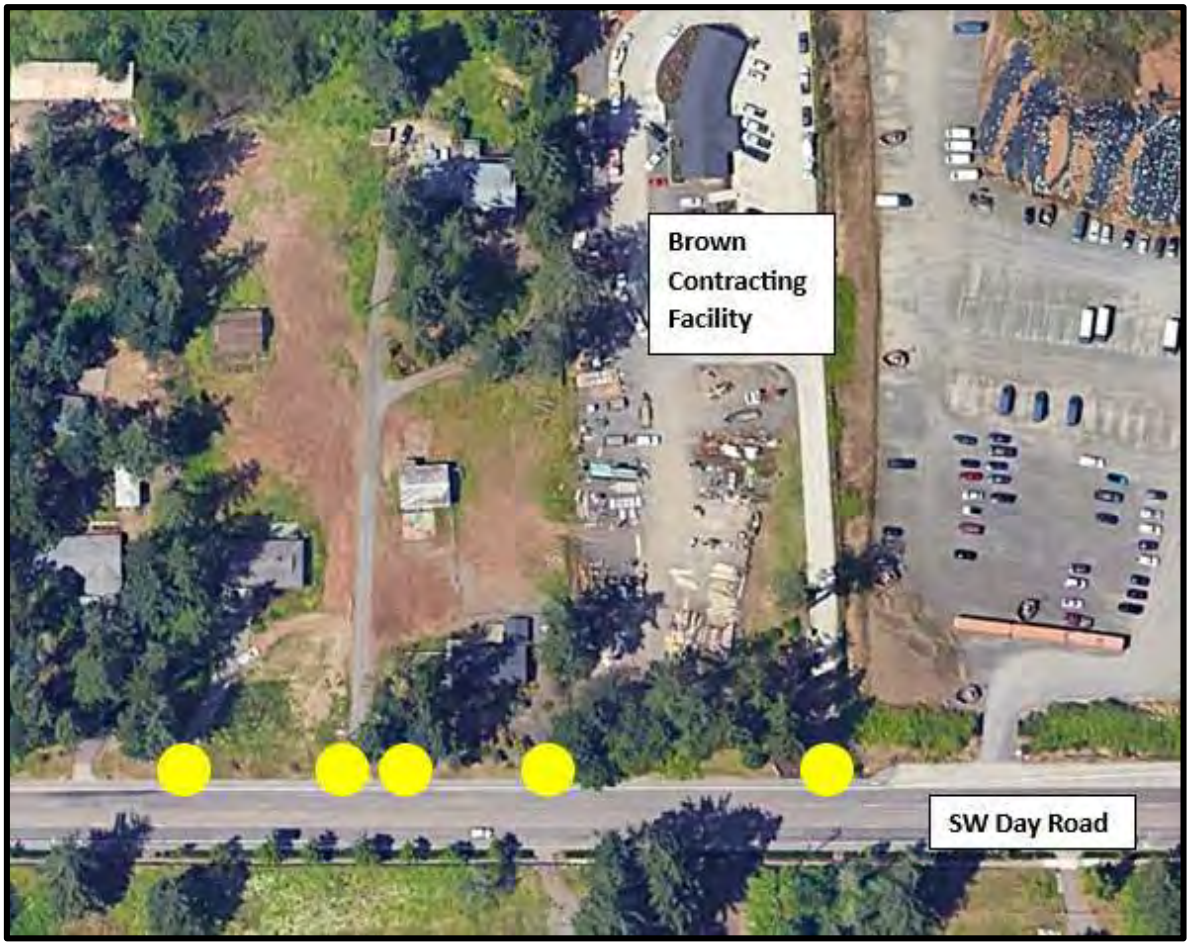

Figure 1: Location of Site Access Driveways

The crash data was evaluated based on the number of crashes, the type of collisions, and the severity of the collisions. Crash severity is based on injuries sustained by the people involved in the crash, and includes five categories:

- *PDO* – Property Damage Only
- *Injury C* – Possible Injury
- *Injury B* – Suspected Minor Injury
- *Injury A* – Suspected Serious Injury
- *Fatality*

Crash rates provide the ability to compare safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the evening peak hour represents approximately 10 percent of the annual average daily traffic (AADT) at the intersection.

ODOT's *Analysis Procedures Manual* (APM) also provides crash rates separated by control type and the number of approaches. Exhibit 4.1: Intersection Crash Rates per MEV by Land Type and Traffic Control of the APM indicates the following 90th percentile crash rates for various intersection configurations. All of the site access intersections are three-legged unsignalized intersection within an urban setting and have a 90th percentile crash rate of 0.293.

The east site access is the main access driveway for the Brown Contracting facility, and was the only study intersection to have any reported collisions within the last five years. Table 1 provides a summary of crash types while Table 2 summarizes crash severities and rates for this study intersection. Detailed crash data is provided as an attachment to this memorandum.

Table 1: Crash Type Summary

Intersection	Crash Type								Total Crashes
	Turn	Rear End	Angle	Fixed Object	Side swipe	Ped/ Bike	Backing	Other	
SW Day Road at Main Facility Site Access	1	1	0	0	0	0	0	0	2

Table 2: Crash Severity and Rate Summary

Intersection	Severity					Total Crashes	Peak Hour Volume	Crash Rate per MEV	ODOT 90th % Rate
	PDO	C	B	A	Fatal				
SW Day Road at Main Facility Site Access	0	0	2	0	0	2	1,010	0.109	0.293

As shown in Table 1, one of the crashes involved a turning vehicle and the other was a rear-end collision; no pedestrians or bicyclists were involved. The turning collision involved a vehicle making a southbound left-turn from the site and a vehicle traveling westbound on SW Day Road. Both vehicles were passenger cars. The rear-end collision involved two westbound vehicles near the site access but neither was coded as turning into the site so it cannot be confirmed that this collision was associated with the site driveway. The striking vehicle was coded as a passenger car while the struck vehicle was coded as a truck.

As shown in Table 2, the site access intersection had no reported fatalities and an intersection crash rate below ODOT's 90th percentile crash rate of similarly configured intersections.

In addition, none of the site access intersections were listed as part of the ODOT 2022 Safety Priority Index System (SPIS) list.

Although crashes were reported near the intersection, none involved a pedestrian or bicyclist, or a collision resulting in a serious injury or fatality. No significant trends or crash patterns were identified at any of the study intersections. Therefore, no safety mitigation is indicated per the crash data analysis.

Sight Distance Analysis

A sight distance analysis was previously conducted at the existing driveway access locations on tax lots 309 and 302, as shown in Figure 2.

Figure 2: Tax Lot Locations

The sight distance analysis[3] concluded that:

- Guidelines for sight distance requirements were based on Washington County sight distance standards for passenger cars as well as AASHTO sight distance standards for a single-unit truck.
- Sight distance measurements were taken in the field at the existing site access points to tax lot 309 (main Brown Contracting facility entrance) and tax lot 302 (construction access). Measurements were taken for both a standard passenger car as well as a single-unit truck.
- Based on the field measurements taken at the site access points to tax lots 309 and 302, there is adequate intersection sight distance for both passenger cars and single-unit trucks to make a left turn and a right turn from the accesses onto SW Day Road, subject to tree trimming along the property frontage of tax lot 310.

[3] Lancaster Mobley, *Brown Contracting, Inc – Sight Distance Analysis*, May 30, 2024.

- We also recommended trimming and/or removing vegetation along both sides of the access point to tax lot 309 to maintain adequate clear views to the east and west.
- The stopping sight distance (SSD) is the minimum requirement to allow for safe operation of the roadway and allows an oncoming driver to see a hazard in the roadway, react, and come to a complete stop, if necessary, to avoid a collision. At both site access locations, with the trimming of overhanging branches and vegetation along either side of the access, available sight distance would exceed the required SSD standard of 305 feet.
- With the above improvements made, the site accesses would have adequate sight distance; no other sight distance mitigation is recommended.

SW Day Road Improvements

City staff are requesting the applicant install 19 feet of new roadway improvements, including an 11-foot vehicle travel lane, 2-foot buffer, and a 6-foot bicycle lane.

Safety Concerns

The City's proposed improvements would be installed along approximately 500 feet of site frontage. The two lanes would need to merge down to one lane at the western-most property line. This puts site access driveways in the middle of the merging transition, which is a safety concern for three reasons. First, westbound drivers focused on merging safely may not be alert to vehicles pulling out of driveways ahead of them, which can lead to turning-movement collisions. Second, drivers focused on merging may not be alert to eastbound vehicles turning left into the site, which can also lead to turning-movement collisions. Lastly, drivers focused on merging may not be alert to vehicles slowing down in front of them to turn into site driveways, which can lead to rear-end collisions.

Currently vehicles making a left-turn onto SW Day Road from any of the site access locations cross one lane of traffic to a center two-way-left-turn median. Adding a second travel lane increases the time it takes for single-unit trucks and passenger cars to make a left-turn out of a site access, as now there are two lanes to cross to make it to the center median. The addition of a second westbound travel lane would increase the recommended AASHTO intersection sight distance for both a passenger car and a single-unit truck: however, the required SSD standard as well as the Washington County sight distance standard would still be met.

Intersection Operations

In addition, the construction of an 11-foot lane to increase the westbound travel lane from one to two lanes for an additional 500 feet will not significantly improve the capacity of the roadway, as the lane merges back down to one lane at the western edge of the property frontage. There will be a slight increase in capacity at the main facility site access intersection, as right-turning vehicles can occupy the shared through/right lane while through vehicles could occupy the dedicated through lane. A Synchro analysis was performed at the main facility site access intersection based on traffic counts collected on June 3, 2023. The analysis was run for the scenario of one westbound travel lane on SW Day Road (existing) and for the scenario of two westbound travel lanes on SW Day Road (one dedicated through lane and one shared through/right lane). Based on the Synchro results, the lane configuration of two travel lanes gives a v/c ratio of 0.03 for the southbound left-turn movement while the lane configuration of one travel lane gives a v/c ratio of 0.04 for the southbound left-turn movement. Both

configurations result in a delay of 14 seconds and level of service (LOS) B. The City of Wilsonville Transportation System Plan (TSP) Policy 5 states that the city street system should be designed and managed to meet LOS D, while the Washington County TSP lists a maximum v/c ratio of 0.90 (LOS D) for urban areas.[4] The intersection is currently operating below both City and County mobility standards with the existing configuration.

Average Daily Traffic Assessment

The National Cooperative Highway Research Program published document 128, a user's guide for multimodal level of service analysis of urban streets[5]. Exhibit 14: AADT Auto Service Volume Table for Auto LOS shows the maximum daily vehicle traffic service volumes for various street cross-sections and control types. Table entries are the maximum AADT (average annual daily traffic) that can be accommodated without exceeding the target level of service for automobiles. Figure 3 shows the auto service volume table from Exhibit 14.

Exhibit 14: AADT Auto Service Volume Table for Auto LOS

Two-Way Lanes	Signal Spacing (ft)	Signal Progress.	Left Turn Lanes	Max. AADT For Auto LOS C	D	E
2	500	None	No	4,000	11,800	13,500
2	500	None	Yes	9,200	12,500	13,800
2	500	Good	No	11,200	13,200	> 14,000
2	500	Good	Yes	12,200	13,500	> 14,000
2	1320	None	No	> 14,000	> 14,000	> 14,000
2	1320	None	Yes	> 14,000	> 14,000	> 14,000
2	>=2640	None	Yes & No	> 14,000	> 14,000	> 14,000
4	500	None	No	8,000	23,700	27,000
4	500	None	Yes	18,400	25,100	27,600
4	500	Good	No	22,500	26,400	> 28,000
4	500	Good	Yes	24,500	27,000	> 28,000
4	1320	None	No	> 28,000	> 28,000	> 28,000
4	1320	None	Yes	> 28,000	> 28,000	> 28,000
4	>=2640	None	Yes & No	> 28,000	> 28,000	> 28,000
6	500	None	No	12,000	35,500	40,500
6	500	None	Yes	27,600	37,600	41,400
6	500	Good	No	33,700	39,600	> 42,000
6	500	Good	Yes	36,800	40,500	> 42,000
6	1320	None	No	> 42,000	> 42,000	> 42,000
6	1320	None	Yes	> 42,000	> 42,000	> 42,000
6	>=2640	None	Yes & No	> 42,000	> 42,000	> 42,000

N/A = LOS not achievable for given configuration and default values.
> XXX means capacity of street exceeded before LOS exceeded.

Figure 3: Exhibit 14 from NCHRP Web-Only Document 128

Based on Figure 3, for a two-way, two-lane roadway with a signal spacing of more than 2,640 feet (distance between signals is greater than 2,800 feet), the maximum AADT for automobile LOS C/D/E is more than 14,000 vehicles per day.

[4] Washington County Department of Land Use & Transportation, *Washington County Transportation Plan*, September 26, 2019, Table 4.

[5] Richard Dowling, *NCRP Web-Only Document: 128: Multimodal Level of Service Analysis for Urban Streets: Users Guide*, November 2009.

The AADT along SW Day Road can be estimated using the common assumption that traffic counted during the evening peak hour represents approximately 10 percent of the daily traffic at an intersection. Traffic counts collected on June 3, 2023, show 1,010 vehicles on SW Day road near the main site access during the evening peak hour. Multiplying the peak hour count by 10 and seasonally adjusting the volume according to the commuter trend in ODOT's 2022 Seasonal Trend Table, yields an estimated AADT of 9,730 vehicles per day, which is lower than the maximum shown in Figure 3.

Based on the estimates of AADT, the current cross-section can adequately serve existing demand with capacity for continuing growth over time.

Conclusions

The following safety aspects along SW Day Road were evaluated:

- Based on a review of the most recent five years of available crash data, none of the site access intersections reported collisions involving a pedestrian or bicyclist, or a collision resulting in a serious injury or fatality. No significant trends or crash patterns were identified at any of the study intersections. Therefore, no safety mitigation is indicated per the crash data analysis.
- Field measurements taken at the site access points to tax lots 309 and 302 found the available sight distance exceeds the required SSD standard of 305 feet and there is adequate intersection sight distance for both passenger cars and single-unit trucks to make a left turn and a right turn from the accesses onto SW Day Road, subject to the following improvements:
    - Tree branches trimmed back along property frontage of tax lot 310
    - Vegetation along both sides of the access points to tax lot 309 trimmed and/or removed to maintain adequate clear views to the east and west
- Widening the roadway to provide the City's proposed improvements of an additional travel lane and a bicycle lane along approximately 500 feet of site frontage appears to offer minimal capacity benefits and may create some safety concerns:
    - The two travel lanes would need to merge down to one lane at the western-most property line. This puts site access driveways in the middle of the merging transition, which can be a safety concern as westbound drivers are focused on merging safely and may not be aware of vehicles turning into/out of driveways ahead of them.
    - The main facility site access intersection along SW Day Road is currently operating at a LOS B, with a delay of 14 seconds and a v/c ratio of 0.04 for the southbound left-turn movement. The intersection currently operates well below both City and County mobility standards with the existing configuration. Widening the roadway to provide an additional travel lane adds minimal improvement to the intersection.
    - Based on the estimates of AADT, the current roadway cross-section can adequately serve existing demand with capacity for continuing growth over time.

Attachments

Crash History Data

Synchro Capacity Reports

SER# / INVEST / RD DPT / UNLOC?	S P E D	D R A L	M J U G	S I N V	W C H L	O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
82614	N	N	N	N	N	N	08/25/2022	16	SW BOONES FERRY RD	INTER	3-LEG	N	N	CLR	S-1TURN	01	NONE 0	STRGHT										29
NONE							TH	0	SW DAY RD	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000	00
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N							45 20 25.3	-122 46 24.89																OR>25				
																02	NONE 0	TURN-R										
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82007	N	N	N	N			02/21/2019	16	SW BOONES FERRY RD	INTER	CROSS	N	N	UNK	ANGL-OTH	01	NONE 0	TURN-R										02
CITY							TH	0	SW DAY RD	CN		TRF SIGNAL	N	UNK	TURN		UNKN	W -S									000	00
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																	PSNGR CAR		01	DRVR	INJC	19	M	OR-Y		000	000	00
																								OR>25				
02563	N	N	N	N			06/09/2022	16	SW DAY RD	ALLEY		N	N	CLR	ANGL-OTH	01	NONE	TURN-L										02,08
NONE							TH	11	SW BOONES FERRY RD	W	(NONE)	UNKNOWN	N	DRY	TURN		PRVTE	N -E									018	00
N							UNK			07			Y	DAY	INJ		PSNGR CAR		01	DRVR	NONE	25	M	OTH-Y		004,028	000	02,08
N							45 20 25.3	-122 46 34.9			(02)													OR<25				
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02987	N	N	N	N			06/12/2019	16	SW DAY RD	STRGHT		Y	N	CLR	S-STRGHT	01	NONE 9	STRGHT										29
NONE							WE	40	SW BOONES FERRY RD	W	(NONE)	UNKNOWN	N	DRY	REAR		N/A	W -E									000	00
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01970	N	N	N	N			05/28/2020	16	SW DAY RD	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
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CITY OF WILSONVILLE, WASHINGTON COUNTY

DAY RD and Intersectional Crashes at DAY RD, City of Wilsonville, Washington County, 01/01/2018 to 12/31/2022

16 - 19 of 27 Crash records shown.

SER# INVEST RD DPT UNLOC?	S P E A U I C O / D M R J S W / E L G N H R / D C S V L K	DATE DAY TIME LAT	CLASS DIST FROM LONG	CITY STREET FIRST STREET SECOND STREET LRS	RD CHAR DIRECT LOCTN	INT-TYPE (MEDIAN) LEGS (#LANES)	INT-REL TRAF- CONTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH COLL SVRTY	SPCL USE TRLR QTY OWNER V# TYPE	MOVE FROM TO	PRTC P# TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
84103	N N N N	11/09/2018	16	SW DAY RD	STRGHT		N	N	CLR	S-1STOP	01 NONE 0	STRGHT									013	29
NONE		FR	115	SW BOONES FERRY RD	W	(NONE)	UNKNOWN	N	DRY	REAR	PRVTE	W -E								000		00
N		4P			08			N	DUSK	INJ	PSNGR CAR		01 DRVR	NONE	44	F	OR-Y		026	000		29
N		45 20 25.3	-122 46			(02)											OR<25					
			26.51																			
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											PSNGR CAR		01 DRVR	NONE	24	M	OR-Y		000	000		00
																	OR<25					
											03 NONE 0	STOP										
											PRVTE	W -E								022		00
											PSNGR CAR		01 DRVR	INJC	47	F	OR-Y		000	000		00
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02539	N N N N	07/16/2020	16	SW DAY RD	STRGHT		N	N	CLR	S-1STOP	01 NONE 9	STRGHT										29
NONE		TH	150	SW BOONES FERRY RD	W	(NONE)	UNKNOWN	N	DRY	REAR	N/A	W -E								000		00
N		5P			08			N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
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01898	N N N N	04/18/2018	16	SW DAY RD	STRGHT		N	N	CLR	S-STRGHT	01 NONE 9	STRGHT										29
NONE		WE	200	SW BOONES FERRY RD	W	(NONE)	UNKNOWN	N	DRY	REAR	N/A	W -E								000		00
N		8A			08			N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
N		45 20 25.28	-122 46			(02)											UNK					
			28.45																			
											02 NONE 9	STRGHT										
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											PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
																	UNK					
03067	N N N N	07/30/2021	16	SW DAY RD	STRGHT		N	N	CLR	S-1STOP	01 NONE 9	STRGHT										29
NONE		FR	300	SW BOONES FERRY RD	W	(NONE)	UNKNOWN	N	DRY	REAR	N/A	W -E								000		00
N		4P			08			N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
N		45 20 25.28	-122 46			(02)											UNK					
			29.85																			
											02 NONE 9	STOP										
											N/A	W -E								011		00
											PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
																	UNK					
01366	N N N N N N	03/18/2019	16	SW DAY RD	STRGHT		N	N	CLR	S-1STOP	01 NONE 0	STRGHT										29
COUNTY		MO	675	SW BOONES FERRY RD	W	(NONE)	NONE	N	DRY	REAR	PRVTE	E -W								000		00
N		6A			07			N	DAWN	INJ	PSNGR CAR		01 DRVR	INJB	51	M	OR-Y		026	000		29
N		45 20 25.25	-122 46			(02)											OR<25					
			35.09																			

HCM 7th TWSC
1: SW Day Road & Site Access 06/05/2024

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	431	557	5	9	4
Future Vol, veh/h	4	431	557	5	9	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	7	14	14	0	0
Mvmt Flow	4	468	605	5	10	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	611	0	-	0	1085	608
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	477	-
Critical Hdwy	4.17	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.263	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	944	-	-	-	242	499
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	944	-	-	-	241	499
Mov Cap-2 Maneuver	-	-	-	-	375	-
Stage 1	-	-	-	-	545	-
Stage 2	-	-	-	-	628	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.08	0	14.18
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	944	-	-	-	406
HCM Lane V/C Ratio	0.005	-	-	-	0.035
HCM Control Delay (s/veh)	8.8	-	-	-	14.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 7th TWSC
1: SW Day Road & Site Access

06/05/2024

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	431	557	5	9	4
Future Vol, veh/h	4	431	557	5	9	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	7	14	14	0	0
Mvmt Flow	4	468	605	5	10	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	611	0	-	0	1085	305
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	477	-
Critical Hdwy	4.205	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2665	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	937	-	-	-	228	697
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	937	-	-	-	227	697
Mov Cap-2 Maneuver	-	-	-	-	358	-
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	628	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.08	0	13.84
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	937	-	-	-	421
HCM Lane V/C Ratio	0.005	-	-	-	0.034
HCM Control Delay (s/veh)	8.9	-	-	-	13.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Andrew Stamp

From: Greg Reinert <greinert@msmlegal.com>
Sent: Tuesday, June 4, 2024 8:28 AM
To: Andrew Stamp
Subject: [EXTERNAL] McClendon Orders
Attachments: Brown Bench Order re MTC.pdf; 2023.07.24 MCLENDON SPO Signed.pdf

Hey Andrew, following up on our call. Attached is a copy of the stipulated protective order that relates to protection of confidential health information (i.e., McClendon's medical records). Also attached is a bench order related to the inspections. The plaintiffs asked for a protective order related to products of the inspection but the court did not issue a protective order.

4640 S MACADAM AVENUE, SUITE 100 • PORTLAND, OR 97239

IN THE CIRCUIT COURT OF THE STATE OF OREGON
FOR WASHINGTON COUNTY

22CV23711
PPOR
Order – Proposed
17080137

OR3.1

Eric McClendon, Lindsey McClendon, Tina McClendon

STATE OF OREGON,
Plaintiff,

vs.

Brown Contracting, Inc.
Defendant.

Truly named. ☐ Proceeded as named.

ORDER

Case # 22CV23711

PTF Acker

Defense Attorney Ferris

Interpreter _____

FTR COURTROOM 422J

PROCEEDING Hrg – Motion

Pltf's motion to compel; for Protective Order;
Def's motion to compel; Request for Sanctions

Verified Correct Copy of Original 8/21/2023.

☐ ARRAIGNED ☐ RIGHTS GIVEN ☐ WAIVED ☐ INTERPRETER(S) APPOINTED ☐ IN CUSTODY
☐ NOT GUILTY PLEA ☐ DENIAL ATTORNEY: ☐ APPOINTED ☐ MAY REQUEST ☐ RETAINED ☐ TO BE RETAINED ☐ WAIVED
OSB# _____ Name _____ ☐ DUII ADVISORY COUNSEL ☐ DEFERRED SENT. COUNSEL

If you are arraigned on a Domestic Violence or Sex Crime, you are prohibited from contacting the named victim even while in custody.

☐ RESET to _____ at _____, at REQUEST of _____
by: Telephone / Letter / Motion / Attorney

☐ Waived speedy constitutional trial/60 day rule rights for this continuance or waiver of 14 day rule for probation violation hearing.
☐ GUILTY / NO CONTEST Plea with SENTENCING on _____ at _____
☐ DEFERRED SENTENCING ☐ DECLINED ☐ PSI Ordered DOB _____ ☐ Atty to be present
☐ ALLOWED ☐ INELIGIBLE Counts/Charges: _____
☐ WAIVED EXTRADITION ☐ REQUESTED GOV. WARRANT Def. Contact Info.: _____

NEXT *PERSONAL* APPEARANCE(S)

☐ PRELIMINARY HEARING ☐ CASE MANAGEMENT on _____ at _____
☐ FINAL RESOLUTION CON ☐ _____ on _____ at _____
Previously Set ☒ ~~CASE ASSIGNMENT~~ ☐ _____ on 8/31/23 at 9:00
☒ TRIAL ☐ _____ on 9/14/23 at 9:00

PRELIMINARY HEARING ☐ PRELIM WAIVED** by: _____
☐ Probable cause found on count(s) _____ ☐ Probable cause not found on count(s) _____
☐ INFORMATION DISMISSED ☐ INDICTED **
☐ WAIVED INDICTMENT ** ** with NEXT APPEARANCE DATE _____ at _____ in LEC1

☐ FAILED TO APPEAR for _____ ☐ SECURITY FORFEITED JUDGMENT TO BE ENTERED ☐ SECURITY NOT FORFEITED AT THIS TIME
☐ REVOKE RELEASE
☐ *BENCH WARRANT ORDERED* ☐ *ARREST WARRANT ORDERED* *SECURITY:* $ _____

☐ JUDGMENT OF ACQUITTAL Ct(s): _____ ☐ Finding of NOT GUILTY Ct(s): _____
☐ JUDGMENT OF DISMISSAL (Control # _____) ☐ Finding of GUILTY Ct(s): _____
☒ Other Both Motions to Compel inspections are granted as outlined on the record. Motions for sanctions denied. Trial is Reset. Mr Ferris shall prepare the Order conforming to the Court's statement on the record.

Date: 8/21/23 Parties to contact calendaring with new trial date – previously set dates canceled

ARE
(Printed / Stamped Name of Judicial Officer)

(Rev – 11/19) GPO Original: Court Yellow: Defense Attorney Pink: District Attorney Goldenrod: Pltf/Defendant

IN THE CIRCUIT COURT OF THE STATE OF OREGON

FOR THE COUNTY OF WASHINGTON

ERIC McCLENDON, individually; LINDSEY McCLENDON, individually; TINA McCLENDON, individually,

Plaintiffs,

vs.

BROWN CONTRACTING, INC., an Oregon corporation,

Defendant.

Case No. 22CV23711

ORDER ON STIPULATED PROTECTIVE ORDER

Based upon the stipulations of Plaintiffs and Defendant, as evidenced below, and the Court now being fully advised,

NOW, THEREFORE, IT IS HEREBY ORDERED AS FOLLOWS:

The records identified below shall be handled and treated by the Parties in accordance with the following conditions:

1) **Scope of Order.** This Stipulated Protective Order (the "Order") shall govern Confidential Health Information ("CHI"), which is defined in Section 2, below. "Party," as used herein, means a named plaintiff or defendant in this litigation. "Non-Party," as used herein, means any person or entity who is not a Party, and who produces any CHI in this litigation. This Order is intended to govern only pretrial proceedings. The Parties agree to meet and confer before trial regarding how to handle CHI prior to trial.

MACMILLAN, SCHOLZ & MARKS, LLC
ATTORNEYS AT LAW
900 SW 5th Avenue, Suite 1800
PORTLAND, OREGON 97204
TELEPHONE (503) 224-2165

2) **CHI Defined.** CHI means health information as defined in ORS 192.556 (11) that is collected from a health care provider, health care facility, state health plan, health care clearinghouse, or health insurer that: (a) relate to the person's physical or mental health or condition; or (b) relate to the cost or description of any health care services provided to the person.

3) **Designating CHI as "Confidential."** At or prior to the time of production or disclosure, a Party or Non-Party may designate as "Confidential" any CHI, or any portion thereof, produced or disclosed by, or on behalf of, that Party or Non-Party that contains CHI. In addition, documents produced by a health care provider, as defined in ORS 192.556, will automatically be deemed "Confidential." Lastly, a Party may also designate CHI produced by any other Party, or by any Non-Party, as "Confidential" provided that the designating party has a good faith basis for doing so, by providing written notice of the designation within thirty (30) days of the last dated production of the relevant CHI or within thirty (30) days of the entry of this Order.

4) **Disclosure of CHI.** CHI shall not be disclosed except to the following:

a) Parties, the attorneys of record for the Parties, including those staff who are reasonably required to work with the attorneys of record on this litigation;

b) Any court, mediator, or arbitrator handling any aspect of this case, including their personnel, and court reporters and videographers transcribing or recording testimony at depositions or hearing;

c) Outside counsel for the parties retained in this litigation and on other matters related to this litigation, including contract attorneys, regularly or temporarily employed support personnel, and outside vendors as reasonably incident to discovery and to the preparation for trial;

d) In-house counsel for any Party, including regularly employed support personnel, as necessarily incident to discovery and to the preparation for trial;

e) Outside consultants and/or experts engaged or used by a Party hereto for the purpose of this litigation;

f) Insurance carriers, including their claim adjusters and counsel, of either Party;

g) Any person who authored or previously received the document or information either before or after its designation as "Confidential;"

MACMILLAN, SCHOLZ & MARKS, LLC
ATTORNEYS AT LAW
900 SW 5th Avenue, Suite 1800
PORTLAND, OREGON 97204
TELEPHONE (503) 224-2165

h) Potential witnesses, witnesses noticed for depositions, designated witnesses for trial, and their counsel in connection with their testimony, or in preparation therefor; and

i) Any other person agreed to in writing by counsel for the Party designating the materials as confidential, as necessarily incident to discovery and/or the preparation for trial of this matter;

5) Prohibited Use and Return or Destruction of CHI. This Order prohibits the Parties from using or disclosing CHI for any purpose other than the litigation for which the information is produced, and that, at the end of the litigation, requires the return of all CHI to the original custodian, including all copies made, or the destruction of all CHI. Digital copies may be stored pursuant to counsel's file retention obligations under the Professional Liability Fund and for audit purposes. All digital copies of protected health information shall be destroyed within SEVEN (7) years of the termination of the lawsuit.

6) **Court Proceeding.** If a non-designating Party wishes to submit to the Court any Confidential material, or to use or refer to the same in briefs, declarations, affidavits, or any other documents or submissions, the Party shall, at least two days in advance of the filing, notify the designating party to determine if the Parties can resolve the use of the materials without requiring the Court to seal any part of the record. The Parties agree to negotiate in good faith to avoid requesting the Court to seal "Confidential" documents. If the Parties cannot reach an agreement to avoid filing under seal, and the party designating the materials still believes the materials should be filed under seal, then the designating Party shall comply with UTCR 5.160. Pursuant to UTCR 5.160, a party seeking to file under seal documents designated as "Confidential" under this protective order must file a motion to file documents under seal that specifies: (a) the statutory authority for sealing the documents; (b) the reasons for protecting the documents from public inspection; and (c) a description of the documents to be sealed. The judge hearing the motion may require the moving party to submit the documents to the court for in camera review.

MACMILLAN, SCHOLZ & MARKS, LLC
ATTORNEYS AT LAW
900 SW 5th Avenue, Suite 1800
PORTLAND, OREGON 97204
TELEPHONE (503) 224-2165

IT IS APPROVED AND SO ORDERED

7/24/2023 3:33:26 PM

Circuit Court Judge, Theodore E. Sims

IT IS SO STIPULATED:

/s/ Randal B. Acker Dated: July 24, 2023.
Randal B. Acker, OSB #921879
Attorney for Plaintiffs

/s/ Gregory A. Reinert Dated: July 24, 2023.
Gregory A. Reinert, #084511
Of Attorneys for Defendant

Presented by:

Gregory A. Reinert, #084511
McMillan Scholz & Marks, LLC
900 SW 5th Ave., Suite 1800
Portland, OR 97204
(503) 224-2165
greinert@msmlegal.com
Of Attorneys for Defendant

CERTIFICATE OF READINESS – UTCR 5.100

In accordance with UTCR 5.100, I hereby certify that I caused the foregoing document to be served on (a) counsel no less than three days prior to submission, (b) accompanied by a stipulation by each counsel that no objection exists as to the judgment or order, or (c) served on self-represented parties no less than seven days prior to submission with a notice of time period to object. The submission is ready for judicial signature because:

☒ 1. Each party affected by this order or judgment has stipulated to the order or judgment, as shown by each opposing party's signature on the document being submitted.

☐ 2. Each party affected by this order or judgment has approved the order or judgment, as shown by each party's signature on the document being submitted or by written confirmation or approval sent to me.

☐ 3. I have served a copy of this order or judgment on each party entitled to service and:

- ☐ a. No objection has been served on me.
- ☐ b. I received objections that I could not resolve with a party despite reasonable efforts to do so. I have filed a copy of the objections I received and indicated which objections remain unresolved.
- ☐ c. After conferring about objections **[opposing party]** agreed to independently file any remaining objection.

☐ 4. Service is not required pursuant to subsection (3) of this rule, or by statute, rule or otherwise.

☐ 5. This is a proposed judgment that includes an award of punitive damages and notice has been served on the Director of the Crime Victims' Assistance Section as required by subsection (5) of this rule.

☐ 6. Other: _____.

DATED: July 24, 2023.

MacMILLAN, SCHOLZ & MARKS, LLC

By: */s/ Gregory A. Reinert*
Megan L. Ferris #063404
mferris@msmlegal.com
Gregory A. Reinert #084511
greinert@msmlegal.com

Of Attorneys for Defendant
Brown Contracting, Inc

MACMILLAN, SCHOLZ & MARKS, LLC
ATTORNEYS AT LAW
900 SW FIFTH AVENUE, SUITE 1800
PORTLAND, OREGON 97204
TELEPHONE (503) 224-2165

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I served the foregoing **[PROPOSED] ORDER ON STIPULATED PROTECTIVE ORDER** upon the following attorney(s) at the following addresses (es) via email:

Randal B. Acker
Aaron S. Ferreira
Acker & Associates, PC
525 SW Jackson Steet
Portland, OR 97201
acker@ackerlaw.com
ferrira@ackerlaw.com

DATED: July 24, 2023.

MacMILLAN, SCHOLZ & MARKS, LLC

By: */s/ Gregory A. Reinert*
Megan L. Ferris #063404
mferris@msmlegal.com
Gregory A. Reinert #084511
greinert@msmlegal.com

Of Attorneys for Defendant Brown Contracting, Inc.

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LESLIE A. KOCHER-MOAR*
JOHN R. MACMILLAN*†
ERIC D. VIRSHBO*
MEGAN L. FERRIS*
CHRISTINE L. REINERT*†
ANNAPURNA S. RAMAN

RODERIC S. MACMILLAN, RET. (1976-2012)
CHRISTOPHER B. MARKS, RET. (1983-2020)
ROBERT D. SCHOLZ, RET. (1977-2021)

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ASHLEY L. SHEARER
GREGORY A. REINERT*
JOEL C. SAUNDERS*
COREY KOZACHENKO*
DAVID A. SCHOR
MARK J. FIRMIN

*ADMITTED IN OREGON AND WASHINGTON
†ADMITTED IN IDAHO

January 13, 2023

Via E-Maill
Randal B. Acker
Acker & Associates PC
525 SW Jackson St
Portland, OR 97201
acker@ackerlaw.com

Re: *Eric McClendon, Lindsey McClendon, Tina McClendon vs Brown Contracting, Inc.*
Washington County Circuit Court Case No. 22CV23711
Our File No. I-116.0128D

Dear Mr. Acker,

The following is responsive to recent communications and issues on the above captioned matter.

First, we have been working on running keyword email searches for communications within and to/from Brown Contracting. It has been very costly and time consuming but we are making progress and I anticipate that process will be completed within about 1-2 weeks. .

Second, we have been in communication with Brown regarding your client's concerns about evening noise. Brown does not agree with your client's characterization of its activities but has and will continue to make reasonable efforts to minimize the possibility of disturbances to your client.

Third, we have worked with Brown to generate a record of its employees coming to or leaving the Sherwood lot. We stand by our objections to the plaintiff's overbroad business records requests. The attached document was created from voluminous time card records. The task is extraordinarily time consuming. The purpose of disclosing this is to provide the plaintiff with documentation of activity at its Sherwood lot in the interest of transparency. If plaintiffs were to narrow their request for similar documentation for precise dates and times, perhaps additional information along these lines can be produced. At some point, however, the process is overly burdensome and we will need to revisit further disclosures along these lines..

Fourth, I did not get a response from you regarding the drone photos produced by the plaintiff. You indicated the plaintiff does not own or operate a drone so we need to know how he obtained drone photos of the Brown Sherwood lot. Please also verify whether you have produced all documentation of communications between your clients and Washington County regarding their complaints against my client.

Fifth, my client observed someone on the plaintiff's property filming or photographing over the property line. Please provide us with copies of whatever recordings were made and instruct your client cease and desist that activity. We consider it to be harassment and an invasion of privacy.

Finally, it seems clear that a mediation between Brown and your clients is our best chance of achieving a lasting and meaningful resolution to this conflict. Alternative dispute resolution is mandatory in Washington County Circuit Court and there is no need for any pre-conditions or concessions prior to engaging a neutral. As I previously advised, we feel that Kevin Eike would be an excellent fit for this case. .

I look forward to hearing from you.

Very Truly Yours,

/s/ Gregory A. Reinert

Gregory A. Reinert

GAR:gar

LESLIE A. KOCHER-MOAR*
JOHN R. MACMILLAN*†
ERIC D. VIRSHBO*
MEGAN L. FERRIS*
CHRISTINE L. REINERT*†
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JOEL C. SAUNDERS*
COREY KOZACHENKO*
DAVID A. SCHOR
MARK J. FIRMIN

*ADMITTED IN OREGON AND WASHINGTON
†ADMITTED IN IDAHO

December 15, 2022

Via E-Maill
Randal B. Acker
Acker & Associates PC
525 SW Jackson St
Portland, OR 97201
acker@ackerlaw.com

Re: *Eric McClendon, Lindsey McClendon, Tina McClendon vs Brown Contracting, Inc.*
Washington County Circuit Court Case No. 22CV23711
Our File No. I-116.0128D

Dear Mr. Acker,

Emrick Investments, LLC, and Brown Contracting, Inc. have reason to believe Mr. McClendon or someone at 24415 SW Boones Ferry Rd in Tualatin, Oregon has been operating a drone or unmanned aircraft over property or properties owned by Emrick Investments, LLC: 9675 SW Day Rd, Sherwood, OR 97140; 9775 SW Day Rd, Sherwood, OR 97140; 9779 SW Day Rd, Sherwood, OR 97140; and/or 9805 SW Day Rd, Sherwood, OR 97140. This would be in violation of ORS 837.380. There may also be violations of 14 C.F.R. § 107.29 and/or 14 C.F.R. § 107.39

This is a formal notice that Brown Contracting, Inc. and Emrick Investments, LLC do not want any drone or unmanned aircraft flown over any of the aforementioned properties. If the drone or unmanned aircraft flights over the aforementioned properties do not stop, legal action will be taken pursuant to ORS 837.380.

Very Truly Yours,

/s/ Gregory A. Reinert

Gregory A. Reinert

GAR:gar

IN THE CIRCUIT COURT OF THE STATE OF OREGON

FOR THE COUNTY OF WASHINGTON

ERIC McCLENDON, individually; LINDSEY McCLENDON, individually; and TINA McCLENDON, individually; Plaintiffs, vs. BROWN CONTRACTING, INC., an Oregon corporation; Defendant.	)	Case No. 22CV23711 **PLAINTIFF ERIC MCCLENDON'S RESPONSE TO DEFENDANT'S FIRST REQUEST FOR ADMISSIONS TO PLAINTIFF ERIC MCCLENDON**

Plaintiff Eric McClendon ("Plaintiff") responds to Defendant's First Request for Admissions to Plaintiff Eric McClendon as follows.

GENERAL OBJECTIONS & CONDITIONS

1. Plaintiff generally objects to the extent the requests exceed the scope of discovery allowed by the Oregon Rules of Civil Procedure or attempt to impose terms and conditions beyond those permitted under the Oregon Rules of Civil Procedure.

2. Any response by Plaintiff is made without in any way waiving or intending to waive (1) the right to object on the ground of competency, privilege, relevancy, materiality, or on any other ground, to the use of any information, for any purpose in whole or in part, in any subsequent step or proceeding in this action or in any other action; and (2) the right to object on any and all grounds, at any time, to any other discovery procedure involving or relating to the subject matter of this request.

3. Plaintiff generally objects to the extent any request seeks information protected by the attorney-client, work product, or other privilege. In the event that Plaintiff inadvertently discloses information subject to a privilege, any resulting waiver will not extend beyond the specific disclosed information in question.

SPECIFIC RESPONSES

Without waiving and subject to the objections and conditions set forth above, Plaintiff responds to the specific requests as follows.

REQUEST NO. 1: Admit that between March 1, 2019 to the present you possessed unmanned aircraft system.

Response: Admit.

REQUEST NO. 2: Admit that you captured photographs of the Brown Property using your unmanned aircraft system.

Response: Admit.

REQUEST NO. 3: Admit that you captured video of the Brown Property using your unmanned aircraft system.

Response: Denied.

REQUEST NO. 4: Admit that you sent Washington County employee(s) photographs of the Brown Property, which were captured using your unmanned aircraft system.

Response: Admit.

REQUEST NO. 5: Admit you sent Washington County employee(s) video of the Brown Property, which were captured using your unmanned aircraft system.

Response: Denied.

REQUEST NO. 6: Admit you discharged a firearm on the McClendon Property.

Response: Denied.

///

///

REQUEST NO. 7: Admit you asked Brown Contracting, Inc. to construct a fence along the shared property line of the Brown Property and McClendon Property.

Response: Admit.

REQUEST NO. 8: Admit you agreed to contribute to the cost of a fence along the shared property line of the Brown Property and McClendon Property.

Response: Denied.

REQUEST NO. 9: Admit you did not contribute to the cost of a fence along the shared property line of the Brown Property and McClendon Property.

Response: Admit.

Dated this 2nd day of May, 2023.

ACKER & ASSOCIATES, P.C.

/s/ Randal B. Acker

Trial Counsel: Randal B. Acker, OSB No. 921879
acker@ackerlaw.com
Aaron S. Ferreira, OSB No. 002560
ferreira@ackerlaw.com
Attorneys for Plaintiffs

CERTIFICATE OF SERVICE

I hereby certify that I caused to be served, on the date set forth below, a full, true, and correct copy of the foregoing PLAINTIFF ERIC MCCLENDON'S RESPONSE TO DEFENDANT'S FIRST REQUEST FOR ADMISSIONS TO PLAINTIFF ERIC MCCLENDON on:

Megan L. Ferris & Gregory A. Reinert
MacMillan Scholz & Marks LLC
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Portland, OR 97204
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greinert@msmlegal.com
Of Attorneys for Defendant

by the following indicated method(s):

[ ] by **MAIL** in sealed, postage-paid envelope(s), addressed as shown above, and deposited with the U.S. Postal Service in Portland, Oregon.

[ ] by **HAND DELIVERY** to the persons indicated above.

[ ] by **FACSIMILE** to the persons indicated above.

[x] by **EMAIL** to the persons indicated above.

Dated this 2nd day of May, 2023.

ACKER & ASSOCIATES, P.C.

/s/ Randal B. Acker
Randal B. Acker, OSB No. 921879
acker@ackerlaw.com
Of Attorneys for Plaintiffs

Dolan v. City of Tigard,
512 U.S. 374,
14 SCt 2309 (1994).

The government had George Sheetz ‘over a barrel.’ He took his case to the Supreme Court—and won.

April 14, 2024|By NICOLE W.C. YEATMAN

This post has been updated to reflect George Sheetz’s April 12 victory at the Supreme Court.

Picture this: You’re a 65-year-old retiree who bought a small parcel of land in El Dorado County, California. In your career you worked your way up from $5-an-hour laborer to head of your own engineering contracting company. Your plans are modest: You’re installing a manufactured home on your land. You’ve been careful not to spend more money than you have. You still work sometimes as a consultant, even though you’re retired, so that you and your wife can live comfortably. You paid in full for your land—it took you three years, but it’s yours.

Unfortunately, the government is less careful with its money.

El Dorado County is in the middle of a 20-year plan to spend over $800 million improving the area’s roads. The problem? El Dorado doesn’t have $800 million to

spend. So to fund its plan, the county is slapping “traffic impact fees” on anyone who applies for a building permit, including you.

To build a small, manufactured home on your own land, you’re forced to pay the government a traffic impact fee of over $23,000 that will go toward the government’s multimillion-dollar project.

Do you accept the exorbitant fee and move on with your life? Or do you fight the county, taking your case as far as it will go?

George Sheetz decided to fight. “Your whole life you get beat down so many times,” said George. “It’d be nice to win one.”

The case of *Sheetz v. El Dorado County* was argued at the United States Supreme Court on January 9, 2024, with Pacific Legal Foundation serving as co-counsel to Paul Beard from Pierson Ferdinand. George traveled to Washington, DC, for the argument.

And on April 12, 2024, the Supreme Court announced a unanimous ruling in George’s favor.

The good life

El Dorado County, east of Sacramento, has a history. It was home to the California Gold Rush of 1849, when so many ambitious Americans flocked to the area that a new iteration of the American Dream, the “California Dream,” was born.
“For most of us, the California Dream is simply a vision of the good life,” James Rawls writes. “It once was seen glittering in the California gold fields…. Founded on expectation and hope, the California Dream promises to fulfill our deepest longings for opportunity and success, warmth, sunshine and beauty, health and long life, freedom, and even a foretaste of the future.”

George Sheetz is from New Jersey. Like gold prospectors, he moved west to California chasing opportunity: His wife’s family, who’s from California, encouraged him to go to Los Angeles for work.

“They said, ‘Someone as talented as you could make a bundle of money,’” George remembered.

But he *hated* Los Angeles.

“I felt like I was in prison,” he said. After five years, he was done. “I told my wife, ‘I’m going up to the mountains. I’m going to get a job for $5 an hour and go fishing. You can stay here in this cesspool or you can go with me.”

She went with him. They moved to El Dorado County, where George spent 30-odd years as an engineering contractor. When George was about ready to retire, he bought a vacant plot. It was an old gold mining site that he had to clean up. “The more I worked on it, the more I fell in love with it,” he said.

He planned to install a manufactured home on the property. A manufactured home is prefabricated in a factory, rather than built from the ground up. George thought it would require less government red tape than an original construction project.

He wasn’t counting on a $23,420 traffic impact fee.

Government extortion

Before George brought his case, the Supreme Court had already ruled that the government can’t abuse the permitting process to impose conditions on property owners that have no “essential nexus” with the building project being permitted. That was the Court’s holding in *Nollan v. California Coastal Commission* (1987), Pacific Legal Foundation’s first Supreme Court victory. In that case, the Coastal Commission tried to make Pat Nollan’s building permit conditional on him giving up a third of his property for public use. Justice Antonin Scalia said it was “the same as if California law forbade shouting fire in a crowded theater, but granted dispensations to those willing to contribute $100 to the state treasury.”

That certainly seems like what El Dorado County did to George Sheetz.

The legal difference between *Nollan* and *Sheetz* is that in Pat Nollan’s case, the permit conditions came from regulators at the California Coastal Commission. In George’s case, El Dorado County actually passed legislation to establish the traffic impact fee. The government’s argument is that legislative conditions shouldn’t be subject to the same constitutional scrutiny as bureaucratic conditions.

But if that were right, the hypothetical that Scalia imagined in *Nollan*—a California law forbidding shouting fire in a theater while granting dispensations for $100—would pass constitutional muster.

“It doesn’t matter what government actor does the imposing of the exaction,” Paul Beard, a former PLF attorney who has been litigating George’s case for years, told Law360 before the oral argument. “It’s still subject to the same heightened scrutiny.”

Sheetz v. El Dorado County

When George first found out about the $23,420 traffic impact fee, he felt sick to his stomach. He went to the county office.

"They said, 'This is just the way it is,'" he remembered. "And to accept it. And, 'You don't have to build. No one's making you build.'"

When you're dealing with the government, George said, "they pretty much have you over the barrel."

But Supreme Court precedent and the Constitution were on George's side.

In *Nollan*, the Supreme Court called the government's actions "an out-and-out plan of extortion." In a later PLF victory, *Koontz v. St Johns River Water Management District* (argued by Paul Beard when he was at PLF), the Supreme Court extended the precedent set in *Nollan* to monetary exactions in addition to land.

George paid the fee under protest so that he could build his home—then he sued El Dorado County. By the time his lawsuit reached the Supreme Court, it had been going on for seven years. George is now 72.

"My God, the law does not move along at a very good pace," George said. "I see why people give up sometimes."

George was not asking for much: just the freedom to build on his property without being extorted by his own government. Surely that freedom is part of the American Dream and the California Dream.

In its unanimous April 12 decision, the Supreme Court agreed with George: Legislatures can't violate property owners' constitutional rights.

As Justice Amy Coney Barrett wrote in the opinion, "[T]here is no basis for affording property rights less protection in the hands of legislators than administrators. The Takings Clause applies equally to both—which means that it prohibits legislatures and agencies alike from imposing unconstitutional conditions on land-use permits."

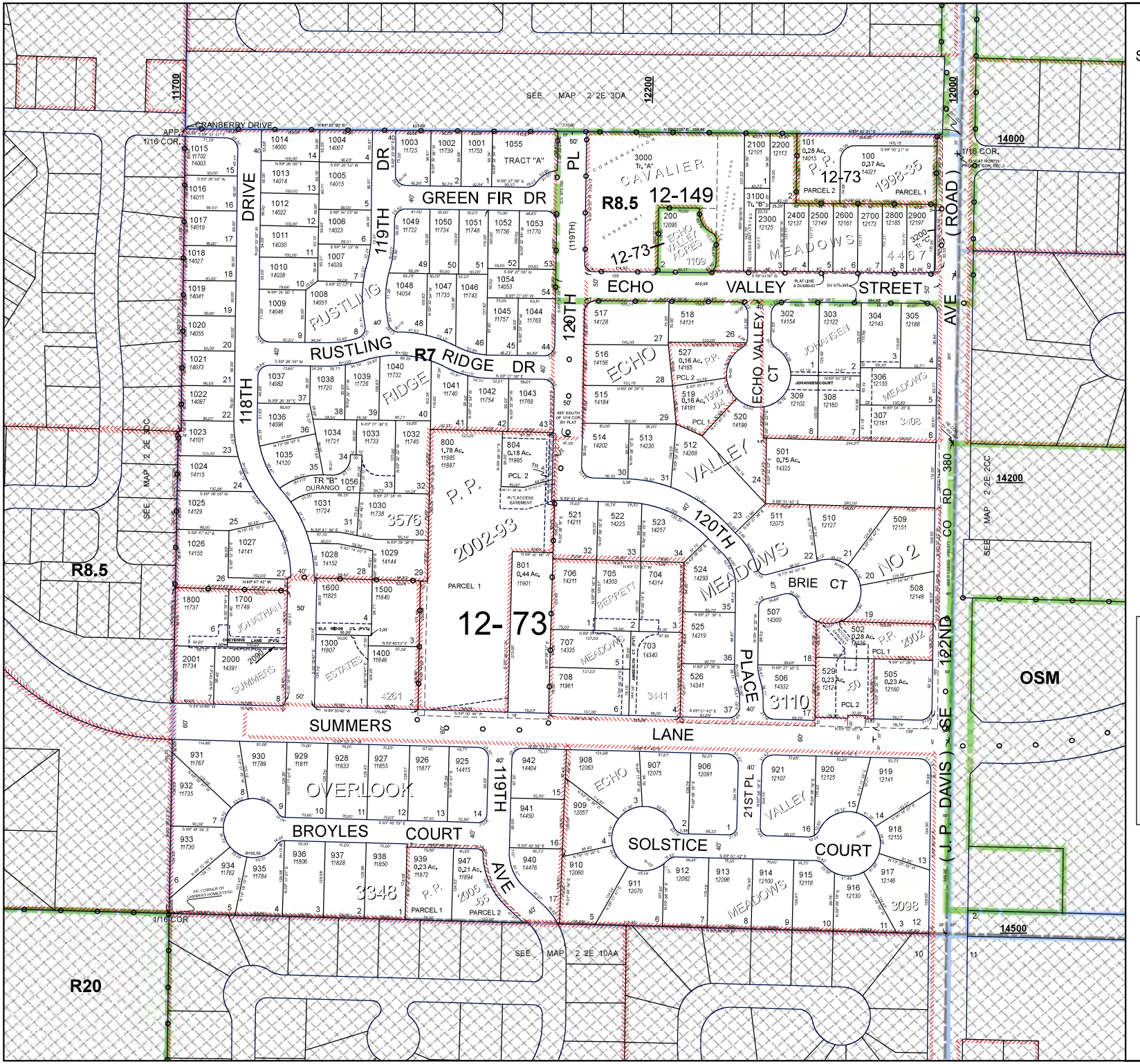
It was, *The Wall Street Journal* quipped, "a bad day for greedy politicians at the Supreme Court." The victory—PLF's 18th win at the Supreme Court—protects property owners across the country from government extortion. At a time when Americans desperately need affordable housing to be built, the *Sheetz* decision lowers costs by getting rid of excessive permit fees.

George Sheetz already built his manufactured home. His victory isn't just about him; it's about stopping the government from extorting anyone else.

When PLF got involved in George's case, we asked him what a victory would mean to him. George said, "I want to go back into that county building, look 'em right in the eye, and say: 'Well, how do you like me now?'"

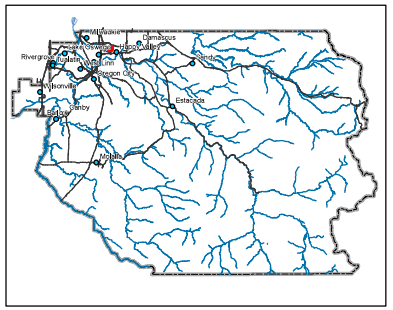
2 2 E 03DD

S.E.1/4 S.E.1/4 SEC.3 T.2S. R.2E. W.M.
CLACKAMAS COUNTY
1" = 100'



- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- Tax Code Lines
- Map Index
- Water Lines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'

201 943 900 944 945 400 903 504 904 301 500 503 701 190 905 922 924 600 300 700 702 802 803 946 901 902 1000 1100 1200 528 923 1900



THIS MAP IS FOR ASSESSMENT PURPOSES ONLY

3/30/2022

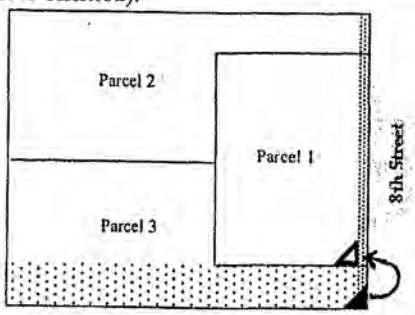
2 2 E 03DD

OR31
Exhibit 34
Page 1 of 1

contains the existing dwelling. Parcel 2 is a 7,700 square-foot parcel, with access to 8th Street via a 20-foot panhandle north of Parcel 1. Parcel 3 is a 7,700 square-foot parcel, with access to 8th Street via a 20-foot panhandle south of Parcel 1. The property could not be further divided under existing zoning.

"The city's planning director approved the proposed partition with conditions. One condition requires that petitioners dedicate 20 feet of right-of-way on the south portion of the subject property to allow for the future development of M Street for both vehicular and bicycle travel. Another condition requires that petitioners dedicate a 10-foot by 10-foot area at the southeast corner of the subject property to ensure adequate sight visibility and turning radius for the M Street/8th Street intersection. The third condition requires that petitioners dedicate a 5-foot strip along the 8th Street frontage of the subject parcel to widen the 8th Street right-of-way to allow for the construction of a curbside sidewalk and street lighting. Finally, petitioners [were] required to improve the 8th Street frontage with sidewalks and street lighting.

"Petitioners challenged the conditions of approval to the city planning commission, arguing that the proposed conditions were excessive, unconstitutional exactions. The planning commission affirmed the planning director's decision imposing the dedication and improvement requirements. However, the planning commission modified the fourth condition of approval to require that petitioners sign a development agreement to ensure future sidewalk and street lighting improvements, rather than requiring the immediate construction of the sidewalks and street lighting. The planning commission adopted supplemental findings to support its decision." 37 Or LUBA at 762-63 (footnote omitted).



KEY TO DEDICATIONS:

Right-of-way for future M Street development.

10 foot x 10 foot "clipped corner."

Right-of-way for sidewalk/lighting.

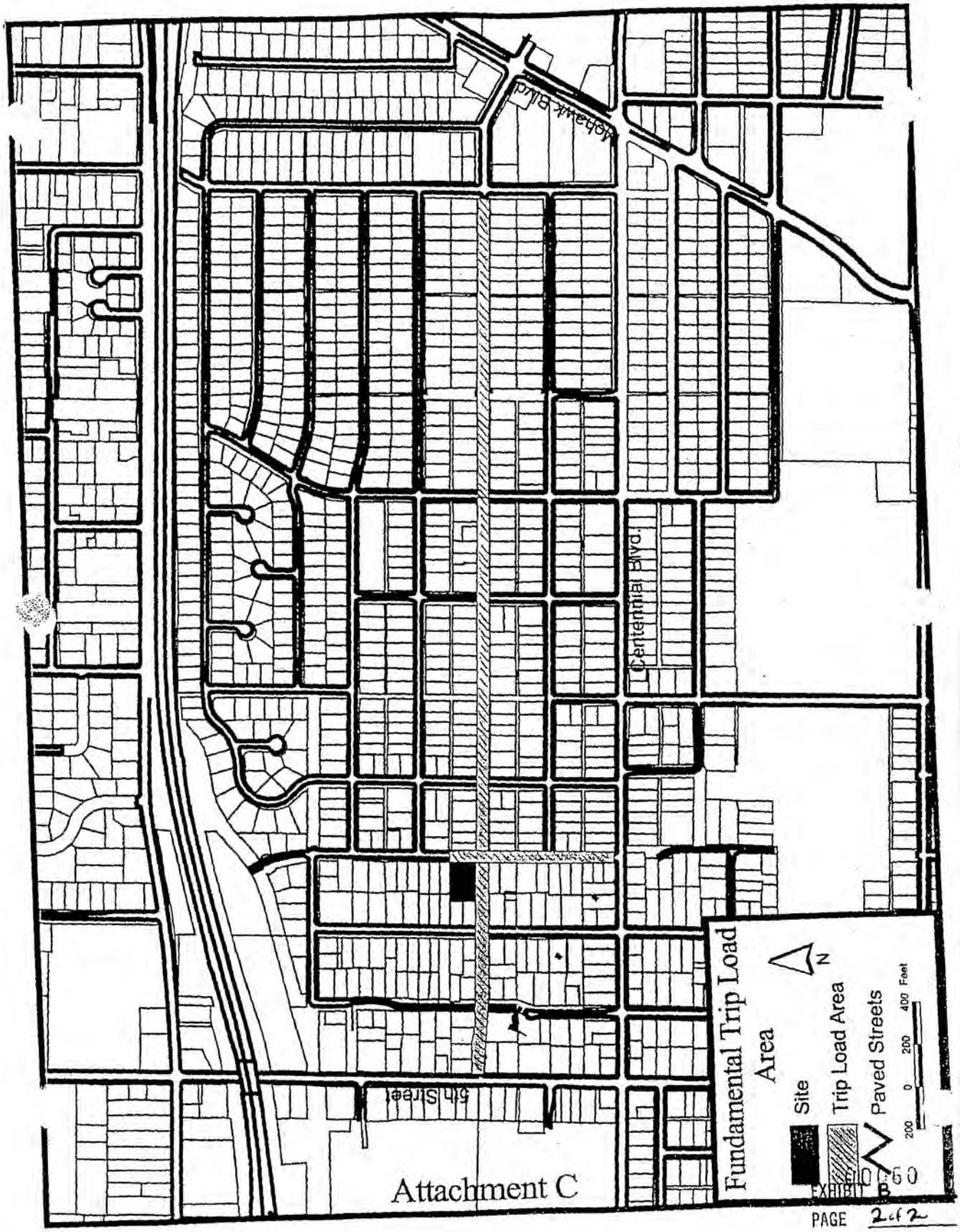
For ease of reference, above is a diagram of the proposed partition and the dedications required by the city. This diagram is provided for illustrative purposes only and is not to scale.

A. The *McClure I* Decision

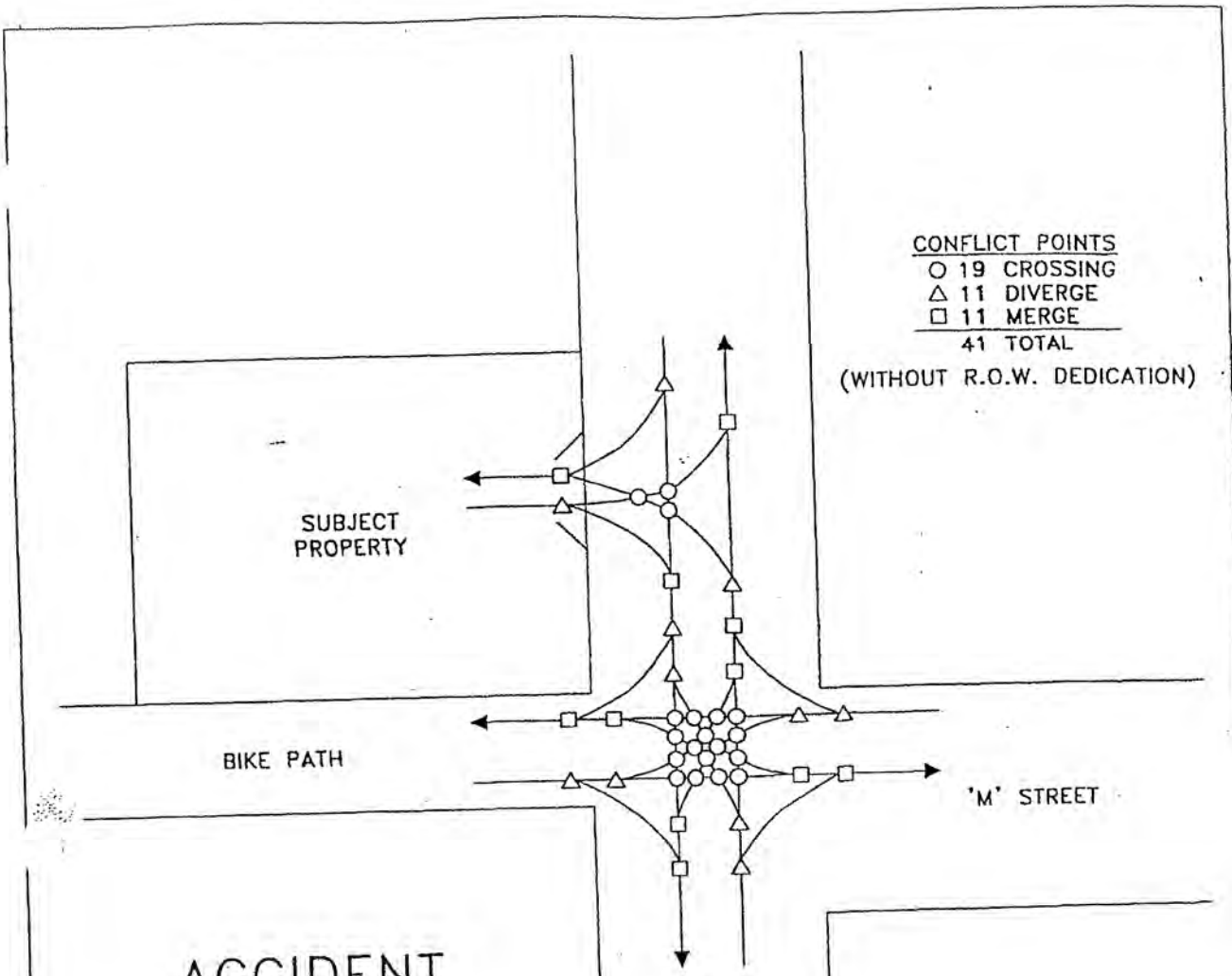
In *McClure I*, we summarized the findings adopted by the planning commission to support its decision as follows:

EXHIBIT A
PAGE 1 of 1

EXHIBIT B
PAGE 1 of 2
00043
Vicinity Map
17-03-26-43 Tax Lot 7000
scale: 1 inch = 500 feet
N
N Street
M Street
L Street
9th Street
8th Street
Site
Centennial Blvd
7th Street
M Street
6th Street
Fire Station
5th Street
Moffitt Elementary School
Hamlin Middle School



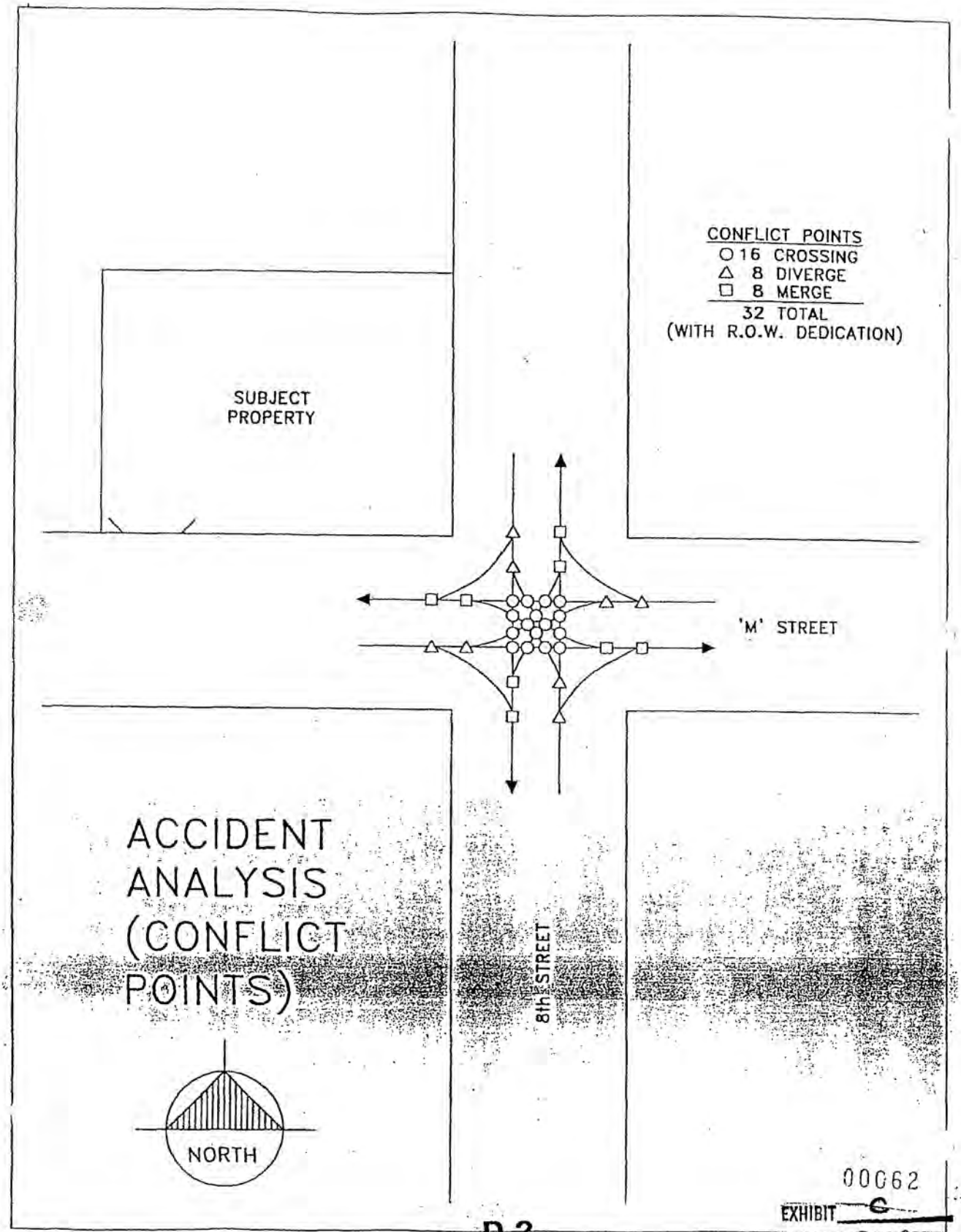
Attachment C



ACCIDENT ANALYSIS (CONFLICT POINTS)

EXHIBIT C 00061
PAGE 1 of 2

ATTACHMENT D-1

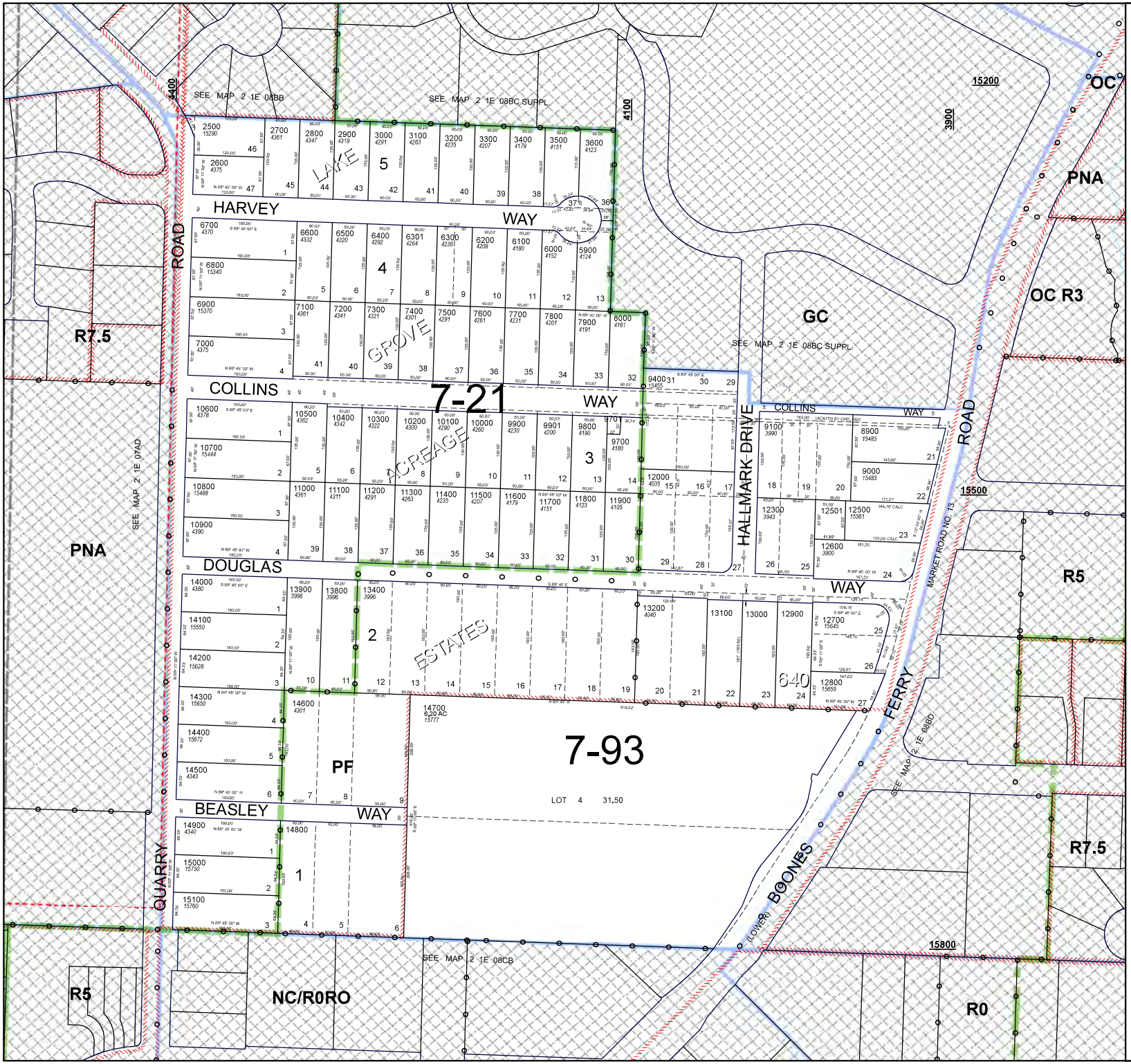


00062

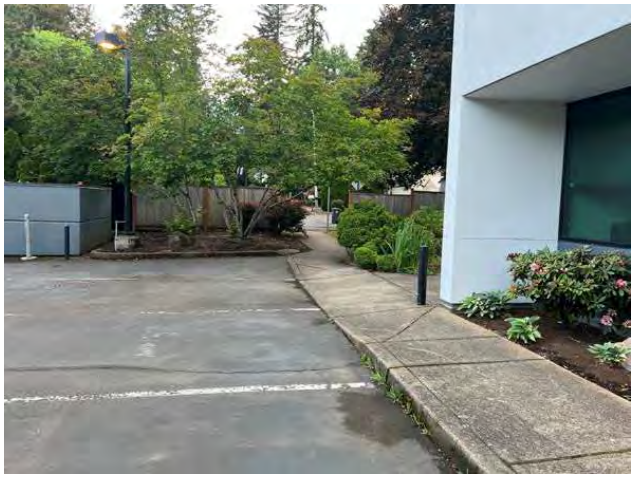
EXHIBIT C

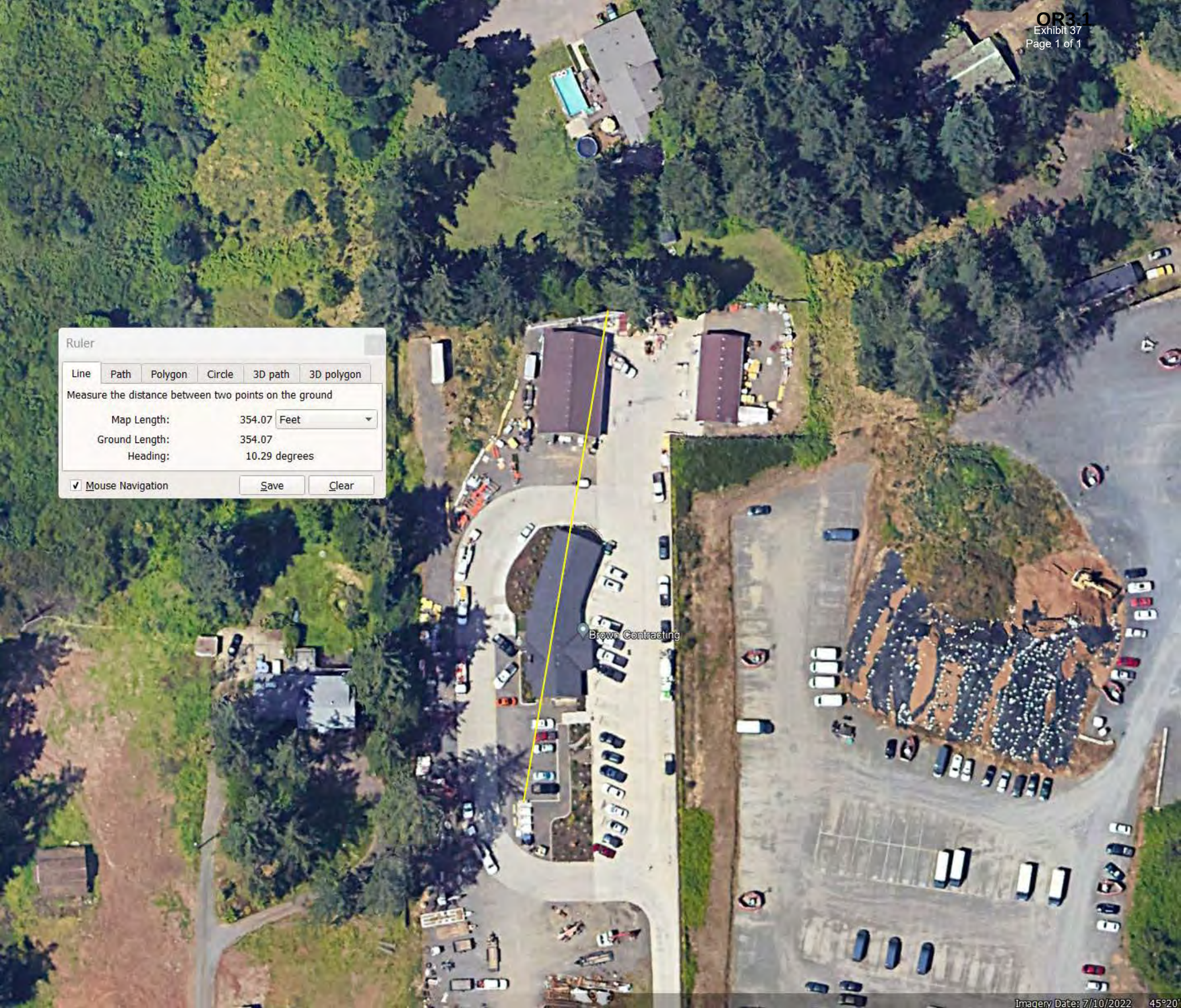
PAGE 2 of 2

D-2


2 1 E 08BC
LAKE OSWEGO
S.W.1/4 N.W.1/4 SEC.8 T.2S. R.1E. W.M.
CLACKAMAS COUNTY
1" = 100'
Cancelled Taxlots
4000 1401
400 1500
13500 1501
13600 1600
13700 1601
3501 1700
3601 1701
5901 1800
6001 1900
600 2000
2100 13300
2200 12301
2300 12302
2400 12701
13301 12400
8901 12201
13201 9200
200 9201
300 9300
500 9101
700 12100
800 12200
900 9600
4200 9500
4300 9401
4400 14600E1
4500
4600
4700
4800
4900
5000
5100
5200
5300
5400
8400
8500
8600
8700
8800
1100
1200
3700
3800
3900
4100
5500
5600
5700
5800
8100
8300
1300
1400
Parcel Boundary
Private Road ROW
Historical Boundary
Railroad Centerline
Tax Code Lines
Map Index
Water Lines
Land Use Zoning
Plats
Water
Corner
Section Corner
1/16th Line
Govt Lot Line
DLC Line
Meander Line
PLSS Section Line
Historic Corridor 40'
Historic Corridor 20'
SEE MAP 2 1E 08BB
SEE MAP 2 1E 08BC SUPPL
SEE MAP 2 1E 07AD
SEE MAP 2 1E 08CB
SEE MAP 2 1E 08BD
HARVEY WAY
COLLINS WAY
DOUGLAS WAY
BEASLEY WAY
LAKE ROAD
GROVE
ACREAGE
ESTATES
HALLMARK DRIVE
MARKET ROAD NO. 13
FERRY
BOONES (LOWER)
QUARRY
7-21
7-93
LOT 4 31.50
14700 6.20 AC 15777
640
PF
GC
OC
OC R3
PNA
R7.5
R5
R0
NC/R0RO
15200
15500
15800
4400
4100
3900
THIS MAP IS FOR ASSESSMENT PURPOSES ONLY
3/22/2022
OR3.1
Exhibit 36
Page 1 of 2
2 1 E 08BC
LAKE OSWEGO

Hallmark Inns and Resorts, Inc. v. City of Lake Oswego, 193 Or App 24 (2004).




Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length: 354.07 Feet
Ground Length: 354.07
Heading: 10.29 degrees
Mouse Navigation
Save
Clear
Brown Contracting
Imagery Date: 7/10/2022

Mark Fritch Log Homes
Marmot Road Worksite

Vibration Study and Analysis

June 4, 2015

By

Mark Fritch
59905 East Marmot Road
Sandy, Oregon 97055

1. Introduction & Purpose.

The applicant this Vibration Study and Analysis in order to demonstrate compliance with ZDO 822.05(F) and ZDO 1203.03(D).

ZDO 822.05(F) provides as follows:

> *F. Vibration, Glare, Fumes, and Odors: The home occupation shall not create vibration, glare, fumes, or odors detectable to normal sensory perception off the subject property. Vehicles entering or exiting the subject property shall be exempt from this standard, but idling vehicles shall not.*

ZDO 1203.03(D) provides as follows:

> *D. The proposed use will not alter the character of the surrounding area in a manner that substantially limits, impairs, or precludes the use of surrounding properties for the primary uses allowed in the zoning district(s) in which surrounding properties are located.*

At least one opponent, Mr. Lon Welch, has testified that "[w]hen the machinery and saws are operating, we can hear them and fell the concussive vibrations from them throughout our house." Mr. Welch does not provide any evidence to support his claims. However, the applicant recognizes that it has the burden of proof to address this issue.

To demonstrate compliance with the standard, the applicant has measured the vibration from three activities: the movement of the Peterbilt dumptruck along Marmot Road (a control), the movement of the Telehandler loaded with two large maple logs weighing 2400 lbs on the subject property, and a "drop-test" in which these same logs were dropped from a height of 5 feet in order to measure the vibration created by such a drop. The "log drop" test will create vibration far in excess of any other activity that is perceivable on the site, and is therefore considered a "worst-case" scenario for vibration.

2. Testing Equipment & Scale.

The applicant used a Samsung Galaxy 4 loaded with the Sound Meter Pro (version 2.4.10) application, to measure the vibration levels of activities using the SkyTrak 636 telehandler and the seismometer. This app is designed to measure anything that vibrates, shakes or moves using the phone's built in accelerometer. The device measures movements in two axes, calculate the resulting energy and draws the results on a rolling logarithmic scale. The accelerometer is very sensitive. For example, simply placing the phone on the inside of your wrist while sitting as still as possible, the phone will read 1.0 to 1.5 for even a resting heartbeat.

The Sound Meter Pro app measures vibration by using the Modified Mercalli Intensity (MMI) scale. The Mercalli Scale relates to the amount of structural damage experienced in a seismic event rather than an amount of energy released. The app uses a logarithmic scale to approximate the MMI scale, where each increasing number is 10 times greater than the previous

level. The scale registers from a Class I, 'Not Felt,' to a Class X, 'Extreme.' The MMI is similar to the Richter Scale and has displaced the Richter Scale in most cases. The following table provides a summary of the MMI scale's values:

Table 1 - Description of the Modified Mercalli Intensity

Level - Description - Damage

Level I - Not felt - Not felt except by a very few under especially favorable conditions.

Level II - Weak - Felt only by a few persons at rest, especially on upper floors of buildings.

Level III - Weak - Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.

Level IV - Light - Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.

Level V - Moderate - Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.

Level VI - Strong - Felt by all; many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.

Level VII - Very Strong - Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.

Level VIII - Severe - Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.

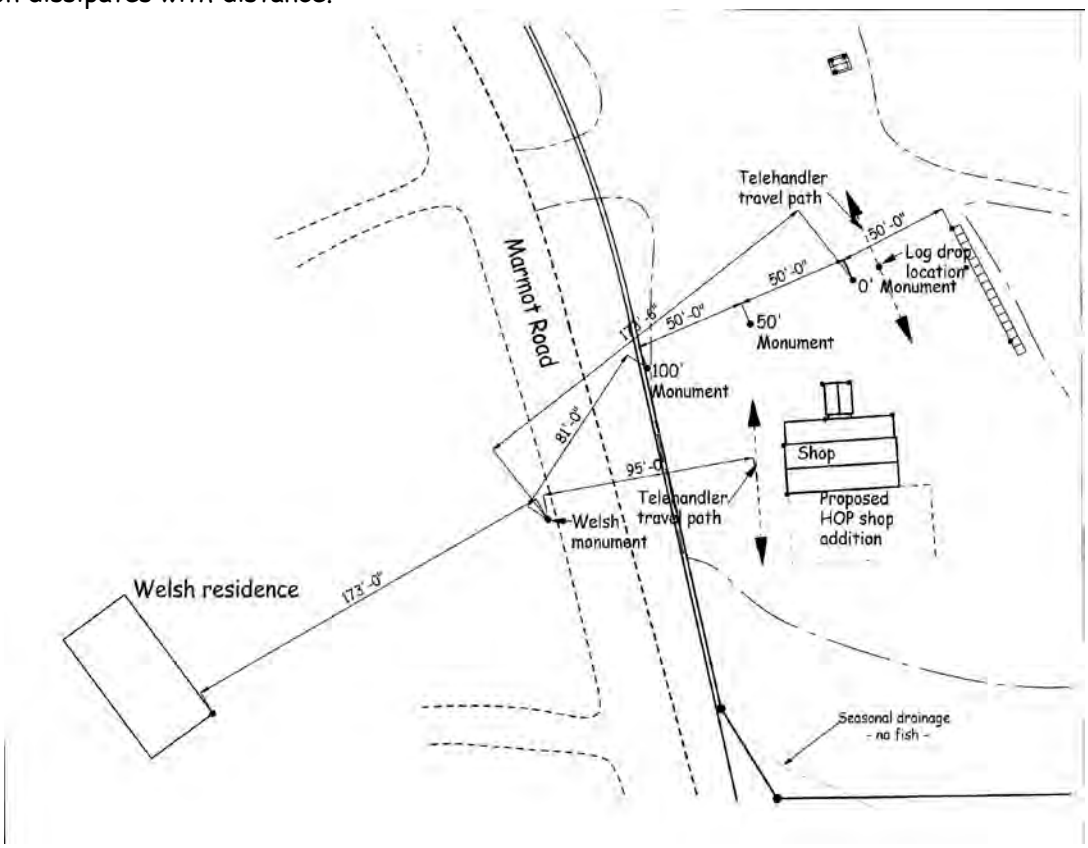
Level IX - Violent - Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.

Level X - Extreme - Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

3. Test Parameters.

The applicant designed a testing scenario to see what level of vibration was produced by the telehandler driving and handling logs. 12" x 12" concrete pier pads weighing 50 lbs. were placed at four locations. Monument 0' was placed 50' southwest of the northwest corner of the sawmill with the 50' the 100' monuments placed in a straight line from there. The Welsh Monument was 81' from Monument 100' and 173' 6" from Monument 0' in a straight line. All monuments were set firmly on packed soil to insure good vibration transfer. Four passes were made with the telehandler carrying two maple logs weighing a total of approximately 2,400 lbs and measurements were taken at each of the four monuments. Then four additional vibration readings were taken at each monument while the

maple logs were dropped from a height of 5.5'. It should be noted that it would be highly unlikely for the applicant's crew to ever drop a log from 5.5'. This test was done more to calibrate the testing procedure by generating sufficient vibration to ensure that some recordable level of vibration would transfer all the way across the lower work area to the Welsh property line. Calibrating the test in this manner also helps demonstrate how the vibration dissipates with distance.



Several points should be noted for clarity and understanding. All test measurements were recorded in the field using a JVC GZ-HM50U video camera to record the actual data as it was generated by the seismometer. The seismometer was set firmly on the concrete pier pad, a static reading of 0.0 to 0.2 MMI were noted ongoingly even when there was no activity near the monuments. This demonstrates the high degree of sensitivity of the device. All study readings are assumed to be 0.3 and higher.

No vibration was recorded at the Welsh Monument when the telehandler was driving by Monument 0. We then moved the telehandler to a point between the shop building and Marmot road which was 95' from the Welsh Monument and four readings were taken.

The last test was done using the Class 8 Peterbilt dump truck and equipment trailer owned by the applicant. The applicant's crew drove the Peterbilt truck back and forth on Marmot Road four times in the vicinity of the Welsh Monument, and readings were recorded. The truck was driven at 35 mph, which is the highest safe speed at this point on Marmot Road.

The data was then taken to the office, interpreted and entered into an Excel spreadsheet for calculations and evaluation. The SkyTrak is the only piece of heavy equipment used onsite in the PPFP and HOP activities. Any other piece of equipment would produce less vibration.

4. Test Results & Conclusions.

The average travel vibration for the telehandler ranged from 0.30 to 0.38. These are surprisingly low numbers which place the readings in the lower portion of Class I vibrations; ranking them as 'Instrumental. Felt by animals.' The travel vibration generated by the Peterbilt as it traveled on Marmot Road past the Welsh monument averaged 1.35, placing the truck's vibration at about 10 times that of the telehandler logarithmically. While the test readings for the log drop were quite high at the 0' monument, they averaged 1.25 at a location 220' away (i.e. at the Welsh monument). This places the log drop, something that would rarely if ever happen, lower in vibration than a Class 8 truck driving along Marmot Road.

The goal of the study was to determine if the movement of the telehandler and other activities on the site would be generate perceptible vibration for the residents adjacent to the Marmot Road site. A second related goal was to see if the vibrations generated as a result of the applicant's activities would be greater than vibrations generated by a truck moving along Marmot Road.

Using a simple method of measurement, two things were determined. First, the activities of the applicant would not create any vibration that could be felt by human beings on the property of the adjacent neighbors. To that end, we discovered that there is no likelihood of vibration being produced by the applicant's equipment that will be felt within the neighboring residents' homes or on their properties. Secondly, even with artificially high test procedures of dropping logs it was found that typical heavy truck traffic exceeded the log drop test results.

The results of this test provide substantial evidence that the activities of the applicant will have no noticeable impact on the neighbors' lives and well-being. It would appear that the issue of vibration is not an issue of consequence in regard to the PPFP activities.

	Monument ->	0'		50'		100'		Welsh	
	Test #	L	H	L	H	L	H	L	H
Telehandler	1	0.30	0.70	0.30	0.50	0.20	0.30	0.20	0.30
travel mode	2	0.30	0.50	0.20	0.30	0.30	0.40	0.20	0.30
	3	0.30	0.50	0.20	0.20	0.20	0.40	0.20	0.40
	4	0.30	0.30	0.30	0.40	0.20	0.20	0.20	0.50
	Average	0.30	**0.50**	0.25	**0.35**	0.23	**0.33**	0.20	**0.38**
	See notes	1		2		3		14 & 15	
Peterbilt	1.							0.50	1.30
	2.							0.50	1.40
	3.							0.60	1.40
	4.							0.50	1.30
	Average							0.53	**1.35**
	See Notes							6 & 7	
Log drop	1	3.10	7.20	1.80	3.80	2.00	3.80	0.50	1.80
	2	2.60	7.30	1.70	3.70	2.00	4.20	0.30	1.10
	3	2.80	7.00	1.30	4.40	1.30	4.00	0.40	1.10
	4	1.80	6.30	1.60	4.00	1.30	4.40	0.50	1.00
	Average	2.58	6.95	1.60	3.98	1.65	4.10	0.43	**1.25**
	See notes	1		2		3		13 & 15	

Notes and observations from the seismic study data collection process:

1. Monument 0' - Travel and log drop readings were taken as close as possible to this monument.
2. Monument 50' - Data recorded 50' from Monument 0'. Travel and log drop at Monument 0'.
3. Monument 100' - Data recorded 100' from Monument 0'. Travel and log drop at Monument 0'.
4. Monument Welsh Property Line - Data at Welsh property line. Log drop at Monument 0'.
5. Vibration travel circuit - Starts with telehandler at Monument 0', drives north and around to pass over Monument 50', circles around in front of shop, passes back over Monument 50', to upper level, turnaround upper level, come down hill to pass starting point while carrying the two Bigleaf Maple logs.
6. The measurements for the Peterbilt vibrations were taken at the Monument Welsh.
7. Peterbilt was pulling the two axle equipment trailer. Turned around at the CCDOT yard, passed meter at 35 mph., turned around at Mike Pfau's place and drove back past meter at 35 mph. Repeated this process twice. Seismometer set at the NE corner of Welsh property.
8. Minimum vibration levels without any activity ran from 0.0-0.2, all equipment readings were assumed to 0.3 and greater.
9. The farther away from the drop site, the smoother the vibration impulse; more of a thud than a whack.
10. The 50' and 100' log drops did not show up as I had expected. I expected to see the readings drop more quickly. I think that it may have been because of variations in the soil strata and/or a different (better or

worse) connection between the ground and the seismometer. The data did show the log drop readings as being less spikes and more of a smoother wave.

11. Bigleaf Maple logs - Short log ~800#, Long log ~1,600# were dropped by raising the forks to 5.5' and then tipping the forks until they rolled off the forks. The dropping of logs is not something that is purposefully done at the site, as it creates the potential that valuable logs will be damaged.
12. All readings were in Modified Mercalli Intensity measurements.
13. The log drop measurements for the Welsh site were done at Monument 0' which was ~173' away.
14. The telehandler travel vibration was measured in front of the shop, 95' from the Welsh Monument.
15. The Welsh Monument was set on the shoulder of Marmot Road at the NE corner of the Welsh property.
16. The vibration generated with the Peterbilt were greater than that of the log drop 173' away.

In the matter of: BROWN CONTRACTING CONTRACTOR ESTABLISHMENT APPLICATION	Washington County Casefile L24000021-D(IND) DECLARATION OF DON BROWN

I, Don Brown, do depose and say as follows:

1. I am over the age of 18 and competent to testify if called to do so.

2. I am one of the owners of Brown Contracting, LLC ("Brown Contracting"). I have owned Brown Contracting together with Sean Emrick for approximately 28 years.

3. The following are my responses to the photos, videos, and documents submitted into the above-captioned casefile by Mr. Eric McClendon on or about May 31st, 2024.

a. Noise Generally. This neighborhood is not peaceful and quiet, as the opponents suggest. The McClendons and the other opponents live on property that is subjected to a high amount of ambient traffic noise from SW Day Rd, Boones Ferry Road, Grahams Ferry Road and I-5. The average daily traffic volumes for Day Road, Boones Ferry, Grahams Ferry and I-5 amount to tens of thousands of trips. The percentage of heavy trucking is very significant, mainly because thousands of trucks per day are accessing local dump sites, gravel pits, asphalt plants and concrete plants. We believe that our operations are generally consistent with the ambient noise in the area, given the presence of those arterials. We make a conscious effort to be as quiet as possible, while still operating as a contractor establishment. There is some inherent amount of noise that any such operation will generate. For the McClendon's and the neighbors

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to expect a rural park-like atmosphere is not reasonable in the FD-20 zone.

b. Exhaust Brakes. Mr. McClendon faults us for our acoustic engineer not taking samples of the noise from "exhaust brakes." It is important to understand what an "exhaust brake is. Exhaust brakes are not brakes located at the wheel of a truck. They are an engine exhaust inducing reverse torque. A similar type of brake, known as a "jake brake," uses compressed air to accomplish the same purpose. Exhaust breaks and jake brakes are what truckers use to avoid burning up their actual brakes especially when descending significant hills. While useful under the right circumstances and necessary in mountainous / hilly terrain, these types of brakes are obnoxious, noisy, and often prohibited in sensitive areas. Brown Contracting employees never utilize an "exhaust brake" or a "jake brake" on the subject property. In fact, we rarely if ever engage exhaust breaks on public roads. Exhaust breaks will not engage even on demand unless and until you're traveling ~20+ mph and at high RPM's. Having said that, we do hear exhaust brakes and jake brakes coming from Day Road from time to time, and we suspect that Mr. McClendon is confusing these sounds from Day Road with sounds produced on-site. Our trucks do have air brakes, and we do disengage air brakes when releasing them after having parked.

c. In response to the file titled "Video May 22 2024, 4 41 am six days after land use hearing.mov"

    i. Applicant Comment: This video presents a rare occasion where McClendon provides a date/time stamp so that we can verify the source from our own camara footage. Having said that, it is not

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entirely clear what McClendon is complaining about in this video. I think the most likely candidate is backup beepers. It is hard to nail down exactly when the beeper sound starts because the birds are much louder, but I can hear it around 4:40AM from our camera. At that time, we have one person in our yard sitting in an Isuzu. The truck is stationary then at 4:41 pulls away. When the truck leaves our yard and turns on Day Road, the beeping sound continues. This indicates that the source was not our truck. I would assume the most likely source is the construction project across the street or maybe an Amazon truck from others property that shares much more property line with McClendon than we do. Another possible candidate for this complaint is the light that he zooms in on. That's not on our property. Also, you can hear a vehicle drive/drag/fast down day road at 4:40. Our truck is stationary at this time. All this video / audio recording is saved upon our system. Our camera and audio system completely exonerates us here as our Isuzu is a legally muffled - cylinder engine not revving, not backing up, etc. McClendon's line of sight to our property is majorly inhibited via the sight/sound wall, dark ambient light and topography so it's understandable that he'd believe this could be us as opposed to the 250+ Amazon trucks next door (all with backup beepers) and/or the numerous construction sites in proximity to the McClendon property.

d. In response to the file titled "Actual distance between sound study location on porch and property.jpg"

   i. Applicant Comment: This photo appears to have been taken from the McClendons' west property line. The McClendons' property is

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north of Brown Contracting's property, and the photo is not taken from a location near where we operate.

ii. The sound study referenced took place 25 feet from the McClendons' house, as required by the DEQ standards it was intended to demonstrate compliance with or violation of. The location chosen for the sound study was determined to be the location from which the most noise from Brown Contracting could be heard. This location is between the house and Brown Contracting's operations. Mr. McClendon's implications as to otherwise appear to be designed to mislead the Hearings Officer regarding this sound study. The study was performed by licensed professionals in accordance with industry-wide best practices, and was not performed at the location Mr. McClendon implies it was.

e. In response to the file titled "Height difference between lots.jpg"

i. Applicant Comment: The applicant acknowledges that the various properties feature rolling topography.

f. In response to the file titled "Saturday a[e]real of 9675 Saw Day.jpg"

i. Applicant Comment: This image was taken illegally with Mr. McClendon's drone after we had given him written warning to stop trespassing onto our property in violation of ORS 837.380. I suspect it was taken on a Saturday so that we would not be present on-site to witness him trespassing again. It is entirely unclear what this photo is supposed to imply or allege. To me, this illustrates the thinness of his actual claims – a photo showing no apparent issues, which could only have been taken by trespassing.

g. In response to the file titled "Activity under _quiet_ sign Jan 11 2023.mov"

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i. Applicant Comment: This video is 1 minute and 32 seconds long. Of that duration, a Brown Contracting employee is shown using a rubber mallet to pound some indeterminate object for 32 seconds. This activity does not appear to have taken place during hours in which noise generation is more restricted, though the lack of timestamp prevents Brown Contracting from locating this occurrence in its own audio and video records.

ii. The relevant DEQ standards for noise, which have been referred to many times throughout this casefile, require measurement 25 feet from a dwelling. This video shows the videographer to be recording from Brown Contracting's fence line, on our property. Brown Contracting was not notified that Mr. McClendon took issue with its use of a rubber mallet, or that he would be recording a video of it from our property. Nevertheless, the McClendons' house is approximately 164 feet away from the location where this video was filmed. It would be irresponsible to derive anything relating to the alleged noise violations from this video considering the circumstances of its provision.

h. In response to the file titled "May 29, 2024, revving from inside bedroom.mov"

i. Applicant Comment: Again, there is no time stamp provided with this video, which makes it difficult for us to rebut the contents through providing alternative recording sources and different angles. The video does not show whatever it is that is causing the apparent vibration, nor does it sound to me like anything that could be described as "revving." It appears to have been taken in the middle of the day and not at a time when noise would be more restricted.

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ii. In my knowledge and experience, the only piece of equipment we operate that can cause vibrations that could be felt as far away as the McClendon residence is a roller, and it only generates vibration when the vibrator device is engaged (this is called "dynamic mode"). We do not operate rollers on this property, let alone with the vibration device engaged – they are only used on active work sites.

iii. Recently, there was a gravel excavation and grading operation at the Amazon lot that neighbors us and the McClendons. Their operations included rollers, trucks, and other such vehicles. By their own admission, the McClendons do not have a line of sight to this lot, and would not have been able to tell if activity was taking place there unless it was audible or, as may have been the case here, felt. I suspect that the McClendons often mistake the noise made on that lot for noise we created, and this is certainly the only theory I have for how the McClendons would feel vibration from a neighboring site.

i. <u>In response to the file titled "May 29, 2024 blowing concrete dust.mov"</u>

i. Applicant Comment: This video displays our staff blowing dust from our driveway onto our gravel area using a leaf blower. The dust is not concrete dust, and I am unsure why Mr. McClendon thought it was. While in retrospect it would have been wiser for us to have swept the dust using a broom instead of using a leaf blower, none of the dust reached anywhere near the McClendon property even with the leaf blower. We agree that it is unacceptable for a dust cloud to reach the McClendon property. However, it is difficult for us to respond further, or furnish evidence that contradicts whatever Mr. McClendon intends to

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imply by submitting this video as, again, no time stamp is provided.

ii. The provision of this video helps clarify that Mr. McClendon's goal is not to help us annoy them less by informing us of when we are doing something that bothers him. He does not ever do this. Instead, he continues to wage a war via complaints to agencies, opposition to our activities, and lawsuits.

j. In response to the file titled "May 29, 2024, revving by fence.mov"

i. Applicant Comment: This file consists of 9.2 seconds of audio of some sort of machine running. There is nothing "revving." 9.2 seconds of noise of any loudness is mitigated by its brevity as far as DEQ standards are concerned. We cannot tell what machine, from what property, nor on what date or time this recording was made. Perhaps it was a pressure washer on another neighbor's property. What we can tell from this file is that it was taken prior to August 2023, because a black sight-obscuring geotextile fabric was installed early in that month, and it is not present in the recording. This indicates that Mr. McClendon has held onto this file for a long time, which to me would imply that his evidence is scant.

k. In response to the file titled "Sep 19 2022, 613 AM revving in unscreened area.mov"

i. Applicant Comment: This nearly two-year-old video demonstrates a truck warming up for the day. It is not "revving." The acoustical engineer report that is already in the record recreated and measured this same action with this exact truck and found the resulting noise was well within the DEQ standards. We would

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offer to recreate it yet again, although Mr. McClendon would likely be reticent to agree given that it would help exonerate us.

ii. In the audio commentary, Mr. McClendon states that the fence visible in the recording belongs to him, which is false. We built that fence and soundwall on our property, and Mr. McClendon has not built a fence or soundwall.

l. In response to the file titled "Decibel Reader 60, 70, 80.MOV"

i. Applicant Comment: We retained Kerrie G. Standlee of DSA Acoustical Engineering, a professional audio engineer, and he will respond to this video. I will additionally note that the video must be quite old, because the sound wall and black geo-fabric sight obscuring materials are not visible, despite having been installed at this location for quite some time.

m. In response to the file titled "Fence Beeping example.mov"

i. We generally do not operate the telehandler at this location because we would have to take down the geofabric sight obscuring fence that connects the sight/sound wall with the storage building. The reason it was operating here on this particular occasion is that our small-tired forklift got stuck back there and the telehandler was freeing it. Our small forklift (which is audibly indiscernible propane fueled) barely ever even accesses this area because we have to take down the sight obscuring geofabric fence. This was a one-time event, and the employee operating the telehandler unfortunately failed to put it in neutral for the better part of the one-minute video, which meant the back up beeper was sounding when it did not need to be. This video does not show our general practice, however.

n. In response to the file titled "Fuel tanks.jpg"

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i. Applicant Comment: We have three fuel tanks located centrally on TL 309, more than 350 feet from the McClendon Property line. These tanks are not visible to the McClendons. Before installing the fuel tanks, we consulted the Fire Marshal and received an on-site pre-installation inspection from him. He informed us where the tanks needed to be placed on site relative nearest structure and stated that 800gal tanks are below the 1,000 gal per tank threshold that necessitates a permit requirement. We also have a voice mail from the fire marshal confirming this. We also retrieved an electrical permits for the power to the tanks. We have documentation of this as well.

o. In response to the file titled "Mutual Fence Line w vehicles and chemicals.JPEG"

i. Applicant Comment: We utilize readily available products such as those that one can purchase from Home Depot. We maintain MSDSs for all chemicals we do possess and use, and we use these products and dispose of them legally and responsibly.

p. In response to the file titled "Closeup chemicals.jpg"

i. Applicant Comment: We do not appreciate Mr. McClendon flying his drone over Brown Contracting's property, as this photo demonstrates. This certainly appears to be illegal trespassing, and we have warned Mr. McClendon via our attorneys that he needs to stop. He has denied that he flies drones over our property, which makes his choice to submit one of his many drone photos taken from over our property a very odd one.

ii. Brown Contracting uses 5-gallon buckets such as the ones shown in this photo for many different uses, such as storing tools; storing

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supplies such as grouts, cold patch, curing compounds, and others; and transferring and moving materials and supplies. On the day this photo was taken, we were temporarily stockpiling all our buckets, whether empty or filled with inventory and products, to reorganize, clean up, dispose of damaged or aged buckets, and subsequently place them back in our warehouse. Mr. McClendon seems to want to imply that these buckets are all full of dangerous substances, which is certainly not true.

q. In response to the file titled "Tanker.TIFF"

i. Applicant Comment: This image appears to depict a delivery of fuel to our onsite fuel tank by an outside vendor. We do not own a "tanker." This does appear to be another illegally-procured drone photo acquired by Mr. McClendon trespassing onto our property.

r. In response to the file titled "December6 2022 1015pm dump truck noise.MOV"

i. Applicant Comment: Mr. McClendon has used this file several times at this point. This file does not portray any visual activity and only contains audio. He first produced it as part of a lawsuit he filed against us. We reviewed our camera system for the date and time in the file title and determined that no activity was occurring on our site at that time, so the activity audible in the recording must have taken place at some other date and/or time. Mr. McClendon has my contact information as well as that of other Brown Contracting staff, but he did not choose to contact us to resolve this instance, which presents another obstacle to us determining exactly what was occurring and when.

ii. Mr. McClendon does not supply an accurate date and time for this recording. We have a microphone recorder placed in very close

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proximity to the spot where Mr. McClendon usually stands on the property line to record and surveil us. If he had supplied an accurate date and time, we could not only supply our video of the occurrence, but also the audio our microphone recorded.

iii. After we first obtained this video during the aforementioned lawsuit, and without being able to determine what caused the sound due to Mr. McClendon's reticence to give an accurate date and time when this recording was created, we experimented by attempting to recreate the sound in the video. The closest we were able to produce was the sound of a dump truck tail gate slamming shut. While not whisper-quiet, this sound is not nearly as loud as Mr. McClendon's recording seems to imply.

iv. One day, we found Mr. McClendon standing at our property line and holding a funnel-like device up to his phone while recording our operations, as he has a propensity to do. We approached him and he maneuvered to attempt to hide the device, which to me appeared similar to a medical device used to inspect the inside of a patient's ears. Out of curiosity as to what the nature of the device was, we researched online and found what we believed to be the same device for sale as a means to magnify noise into a recording device. I am suspicious that this and other audio supplied by Mr. McClendon may have been manipulated using this device so that it seems louder than it was.

s. <u>In response to the file titled "September 19 614am airbrakes and revving bedroom window.MOV"</u>

i. Applicant Comment: This video recording shows a truck leaving our contractor's establishment to go to a job site. At no point in the video does the truck "rev" its engine. It does release air brakes,

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which the acoustical engineering report already in the record tested and found to be entirely compliant with the DEQ standards. This is the "puffing" sound.

ii. The vast majority of the noise in this video is ambient noise from traffic on Day Road and does not derive from activity on our site. The difference is subtle in this video, but careful listening reveals that the ambient traffic noise is dominant throughout the video when compared to our truck. It is suspicious to me that this one-minute video ends right as the noise from our truck is about to subside, as if it were intended to conceal the ambient conditions, which would be plainly audible and differentiable if the video continued slightly longer.

iii. This video was taken prior to August 2023, because the sight-obscuring geotextile fabric that was installed that month is not visible.

t. In response to the file titled "DAY RD FINAL LETTER (1).pdf"

i. This letter is authored by Michelle Wilkins, a County Code Enforcement Officer. The letter and context is discussed extensively in Andrew H. Stamp's letter dated March 25, 2024. The letter discusses an issue with our tree removal. The Wilkens letter discusses several allegations that have been resolved without enforcement action taken against Brown Contracting by the County. We applied for a retroactive tree-cutting permit at great expense. The staff decision issued in that case was not appealed.

ii. Washington County staff informed us in advance that we did not need a permit from them to remove trees from private property. The County was aware of the address and location of this tree

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removal ahead of it taking place. See Andrew H. Stamp's letter dated March 25, 2024 for additional details.

iii. We removed trees as permitted by the Oregon Department of Forestry.

iv. Regarding the alleged grading violation, Washington County subsequently determined that no grading had occurred and that there was no violation. Mr. McClendon had supplied the County with photos he believed to show grading, but these photos actually show our staff re-seeding a back yard, as determined in a site visit by County staff named Kofi and Kim. The County vacated the ostensible violation after making this determination.

v. Next, the letter mentions signs on our property. Mr. McClendon vexatiously complained to the County that we had numerous unpermitted signs installed across our property, misleading the County into initiating enforcement on this matter. We discovered that Mr. McClendon was alleging that our stockpiled construction signage, which we use when temporarily altering traffic patterns for our road construction as required by law or for other similar temporary construction sites, had been *installed* on our site. To our knowledge, the County never followed up on this allegation whatsoever, and it never took any action against us regarding these signs. For an example of the type of signs in question, they are visible in the photo Mr. McClendon submitted titled "Unscreened or buffered area with height difference.jpg". We appreciate that the County dropped this matter rather than forcing us to put time and effort into responding to a plainly bad-faith, nonsense complaint based on illegally-taken drone photos.

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vi. The letter also discusses that our operations have grown. This is true, and it is part of the reason we are seeking a permit to expand our geographic footprint. The main reason is so that we can move more of our operations farther away from Mr. McClendon, and hopefully face fewer such complaints in the future. Nevertheless, he opposes the issuance of this permit, which makes me suspect that his motivation is less about noise mitigation than it is about his desire to deny us use of our site altogether. While it is not necessarily tied to operational growth, our sought geographic expansion is in no small part intended to escape Mr. McClendon's incessant complaints, and unfortunately this effort does not seem well-received.

u. In response to the file titled "Unscreened or buffered area with height difference.jpg"

i. We built a sight and sound wall at our expense on our property. We had a verbal agreement with Mr. McClendon that he would pay for half of this project, but he reneged. We further built a cyclone fence with sight obscuring slats at our expense, sacrificing a significant, useful portion of our property to appease the McClendons. Nevertheless, they continue to complain, and did not keep their end of the deal we had struck on fence construction costs. The McClendons have not built a fence anywhere along our shared property lines.

ii. The McClendons purchased a property at a lower elevation than ours. We have not filled or elevated the surface of our property. The McClendon property did have a substantial unpermitted embankment project that raised its surface height long before the McClendons bought the property.

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v. In response to the file titled "Police Report – Noise (1).pdf"

i. Mr. McClendon has called the Washington County sheriff to complain about our activity many times, and they have paid us at least half a dozen visits during the time he has been our neighbor.

ii. In the early evening of December 11, 2022, employees of Brown Contracting were loading gravel into a dump truck at the Day Road Site in preparation of that night's tasks at the job site. This operation was very limited in scope and occurred over 700 feet away form the McClendons, completely out of sight. The McClendon family called in a noise complaint, and WACO Sheriff Deputy Howell arrived on the scene. Deputy Howell issued a warning to the crew. In response to that incident, Brown Contracting immediately moved the gravel loading operations to a temporary site located a few miles away, and quit loading gravel from the Day Road site at night.

iii. On Dec. 18, 2022, between 7:15 to 7:50 pm, four employees of Brown Contracting were loading a pick-up truck with two "buckets" which are used in conjunction with an excavator. This equipment was needed on a job-site in Beaverton that evening. The events in question were captured by a security camera video. The video shows that the noise-creating operation (i.e. loading the buckets using a telehandler) only lasted eight (8) minutes.

iv. WACO Sheriff Deputy Kibble arrived on the scene. This ended up being the only time that an actual citation for a noise violation was issued. Brown Contracting took the citation to trial, and the judge dismissed the citation on a technicality.

v. Because a time and date were provided with this report, we were able to review our on-site recording systems to determine exactly

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what was happening during this instance, and this revealed that many of the claims in Officer Kibble's police report were false. For instance, our cameras proved that no excavator was even started on the date of this report, and that there was no loading of anything whatsoever into a dump truck. Rather, two of our employees loaded a backhoe bucket into the back of a pickup truck using a forklift at approximately 7:30 PM, and promptly left the site.

vi. We retained an acoustical engineer to precisely recreate the actions that the video system recorded. This engineer determined that the McClendons could not have heard any of the activity taking place during that period from their home. They also could not have seen any activity due to the obscured sight lines from their property to the part of our property where activity was taking place.

4. The following are my responses to the letter submitted into the above-captioned casefile by Ms. Lindsey McClendon on or about May 30, 2024.

a. Tina McClendon states on page 2 of her May 30, 2024 submittal that Brown Contracting engages in "power-washing cement trucks with the runoff going directly into the wetlands because they have no catch basins." This is not true. Brown Contracting does not wash cement trucks on the property as a general practice. Rather, they are washed at the concrete batch plant. Second, we did construct a stormwater facility on TL 309, at considerable cost I might add. This system was designed by engineer Ron Bush, P.E. and approved by Washington County.

5. The following are my responses to the letter submitted into the above-captioned casefile by Ms. Lindsey McClendon on or about May 30, 2024.

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a. In response to the statement that the McClendons "share [their] entire southern property line with Brown Contracting/Emrick Investments"

    i. Applicant comment: Approximately 300 feet of the approximately 800-foot total property line in question is shared with Brown Contracting. The remaining approximately 500 feet is shared with a different property owner.

b. In response to the statement that "Brown Contracting has gone from a small operation to a massive construction yard over the past several years"

    i. Applicant comment: Brown Contracting has owned and utilized Tax Lot 309 for many years. For approximately four years prior to the McClendons moving into their current property, Brown Contracting owned and operated from Tax Lot 309, and the prior owners of the McClendons' property never filed nor notified Brown Contracting of so much as a single complaint for any reason, not limited to those which Ms. McClendon has raised here.

c. In response to the statement that "listening to the hearing it leads us to believe that they feel that the noise is ok and everyone needs to deal with it including Sundays and early mornings"

    i. Applicant comment: Despite the Washington County Sheriff having visited Brown Contracting approximately six times due to the complaints alleged by Ms. McClendon, Brown Contracting has never been found guilty of a noise violation. Some noise is inevitable, and is a normal part of living in a mixed-use area, but as discussed very thoroughly, Brown Contracting takes careful measures to minimize the amount of noise generated on-site and avoids creating noise during times that it would disturb reasonable neighbors. Nevertheless, the Washington County Sheriff

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responsible for noise enforcement has surveilled Brown Contracting for quite some time, and determined that we were not committing any violations. We understand that Mr. McClendon, upon being informed of this determination, reacted quite poorly.

d. In response to the statement that Brown Contracting is "keeping heavy vibrating vehicles a certain distance from our fence"

    i. I do not know what "heavy vibrating vehicles" is intended to mean.

e. In response to the statement that "Mr. Stamp's statement that they pre-load and stage gear ahead of time is simply not true much of the time"

    i. I deny this allegation. The statement Ms. McClendon refers to was accurate. Brown Contracting does pre-load and stage gear ahead of undertaking jobs. This is standard practice for us.

f. In response to the statement that "I don't think the southern fence line was ever adequately screened and buffered due to the height difference between our lots"

    i. Brown Contracting's operating permit required us to install a six-foot-tall fence. We did, and added privacy slats despite them not being required. We then additionally installed a 10-foot-tall sight and sound wall, which measures approximately 18 feet above the McClendons' lot when taking into account the elevation difference between the two lots.

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I HEREBY DECLARE THAT THE ABOVE STATEMENT IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT I UNDERSTAND IT IS MADE FOR USE AS EVIDENCE IN COURT AND IS SUBJECT TO PENALTY FOR PERJURY.

DATED this 10th day of June, 2024.

DocuSigned by:
Don Brown
A055007B8AE24C1...

Don Brown
Owner, Brown Contracting LLC

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DELTA LOGISTICS ANNEX

TRANSPORTATION IMPACT ANALYSIS

FEBRUARY 2022

PREPARED FOR:

WILSONVILLE
OREGON

PREPARED BY DKS ASSOCIATES

Scott Mansur, P.E., PTOE
Jenna Bogert, P.E.
Travis Larson, E.I

REGISTERED PROFESSIONAL ENGINEER
56,267
Digitally Signed 2022.02.14 12:12:24-08'00'
OREGON
JULY 9, 2002
SCOTT M. MANSUR
EXPIRES: DEC. 31, 2022

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INTRODUCTION

This study evaluates the transportation impacts associated with the proposed Delta Logistics Annex industrial development to be located at 9710 Day Road in Wilsonville, Oregon. The project will consist of an approximately 56,100 square foot industrial building which will have direct access to Day Road and an internal connection to the existing auxiliary operations at 9835 Commerce Circle. The project site is located within the Wilsonville Coffee Creek Industrial Design Overlay Zone.

The purpose of this transportation impact analysis is to identify potential mitigation measures needed to offset transportation impacts that the proposed development may have on the nearby transportation network. The impact analysis is focused on the study intersections, which were selected for evaluation. The intersections are listed below and shown in Figure 1. Table 1 lists important characteristics of the study area and proposed project.

1. Site Access/ Day Road
2. Boones Ferry Road/ Day Road
3. Boones Ferry Road/ 95th Avenue
4. I-5 Southbound Ramps/ Elligsen Road
5. I-5 Northbound Ramps/ Elligsen Road

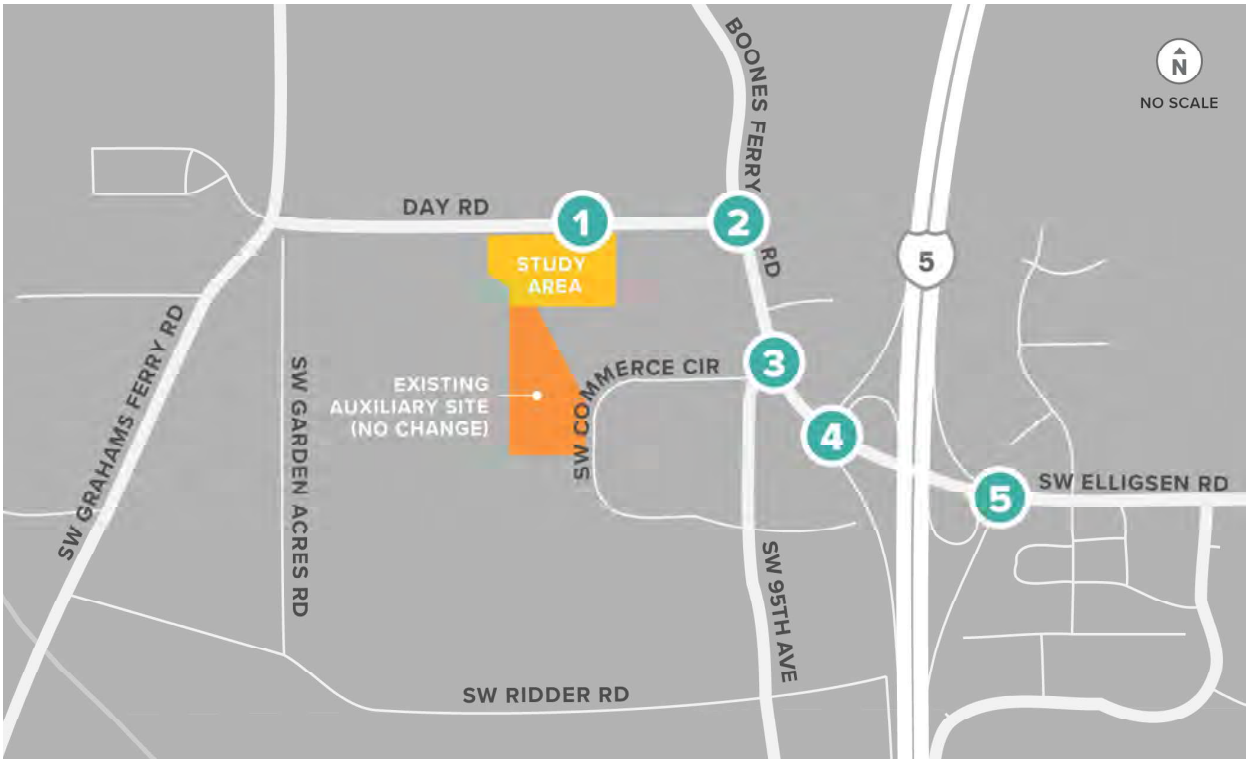

FIGURE 1: STUDY AREA

TABLE 1: STUDY AREA AND PROPOSED PROJECT CHARACTERISTICS

STUDY AREA	
NUMBER OF STUDY INTERSECTIONS	Five
ANALYSIS PERIODS	Weekday PM peak hour (one hour between 4pm and 6pm)
PROPOSED DEVELOPMENT	
SIZE AND LAND USE	56,100 square-foot industrial building
PROJECT TRIPS	33 PM peak hour trips (9 in, 24 out), 127 weekday trips
VEHICLE ACCESS POINTS	One full site access on Day Road and an internal connection to an auxiliary site property on Commerce Circle.
OTHER TRANSPORTATION FACILITIES	
PEDESTRIAN AND BICYCLE FACILITIES	Sidewalks and bicycle lanes currently exist on Day Road fronting the project site.
TRANSIT FACILITIES	SMART Transit Route 5 and TriMet Route 96 have bus stops in the project vicinity.

EXISTING CONDITIONS

This chapter provides documentation of existing study area conditions, including the study area roadway network, pedestrian and bicycle facilities, and existing traffic volumes and operations.

STUDY AREA ROADWAY NETWORK

Key roadways in the study area are summarized in Table 2 along with their existing roadway characteristics. The functional classifications for City of Wilsonville streets are provided in the City of Wilsonville Transportation System Plan (TSP).[1]

TABLE 2: STUDY AREA ROADWAY CHARACTERISTICS

ROADWAY	FUNCTIONAL CLASSIFICATION	LANES	POSTED SPEED	SIDEWALKS	BIKE FACILITIES	ON-STREET PARKING
DAY ROAD	Major Arterial	3	40 mph [a]	Partial [b]	Yes	No
BOONES FERRY ROAD	Major Arterial	3-4	35 mph [c] 45 mph [c]	Yes	Yes	No
95TH AVENUE	Minor Arterial	3	35 mph	Yes	Yes	No
COMMERCE CIRCLE	Local	2	25 mph	Partial [d]	No	Yes
ELLIGSEN ROAD	Major Arterial	4	35 mph	Yes	Yes	No

[a] 35 mph advisory speed west of Boones Ferry Road due to hill and limited sight distance.
[b] Sidewalks only exist on the south side of Day Road.
[c] Posted speed limit on Boones Ferry Road is 35 mph south of Day Road & 45 mph north of Day Road.
[d] Sidewalks exist on the south side of Commerce Circle for approximately 1000 linear feet west of the southern intersection with 95th Avenue.

BICYCLE AND PEDESTRIAN FACILITIES

There are existing marked bicycle lanes on Day Road, Boones Ferry Road, and Elligsen Road (no bike facilities on Commerce Circle). Full sidewalks exist on Boones Ferry Road, Elligsen Road, and 95th Avenue (partial sidewalks on Day Road and Commerce Circle).

PUBLIC TRANSIT SERVICE

South Metro Area Regional Transit (SMART) provides public transportation services within Wilsonville and outlying areas, including Canby, Salem, and the south end of Portland. Route 5 provides service between Wilsonville Transit Center and Commerce Circle on Monday through

[1] Wilsonville Transportation System Plan, Amended November 16, 2020.

Friday with 30-minute headways during peak periods. The closest bus stops are located at the Grahams Ferry Road/ Day Road intersection and at two points along the Commerce Circle loop.

TriMet provides public transportation services in the Portland Metro region. Route 96 services the northern extents of Wilsonville via Boones Ferry Road and Commerce Circle on Monday through Friday with approximately 30-minute intervals during peak periods. Stops are located at the Boones Ferry Road/ Day Road intersection and at a few locations along the Commerce Circle loop.

PLANNED PROJECTS

The City of Wilsonville Transportation System Plan (TSP) has a list of Higher Priority projects which includes the recommended projects reasonably expected to be funded through 2035. These are the highest priority solutions to meet the City's most important needs. The list includes the following projects that impact the key roadways near the proposed project site.[2]

- SI-07 – Add a second southbound right turn lane to the I-5 Exit Ramp at the Boones Ferry Road intersection.
- SI-08 – Improve operations at the Boones Ferry Road/95th Avenue intersection by removing the east private access approach. Pioneer Court access onto Boones Ferry Road will be right-on/right-out. Additional access will occur via a north-south local street connection between Pioneer Court, passing under the Day Road I-5 overcrossing approach, and a new west-east local street (north of Day Road) with full intersection access at Boones Ferry Road.
- RW-02 – Widen Day Road from Boones Ferry Road to Grahams Ferry Road to include additional travel lanes in both directions along with bike lanes and sidewalks; project includes improvements at the Day Road/ Boones Ferry Road and Day Road/ Grahams Ferry Road intersections.
- RW-04 – Widen Boones Ferry Road from Day Road to Basalt Creek Parkway to five lanes.

EXISTING TRAFFIC VOLUMES

Intersection turning movement count data was utilized from a previous traffic study. Those counts were collected on two consecutive weekdays during the PM peak period (4:00-6:00 pm) in September 2021 at the study intersections, and the specific movement data was averaged.

In July 2021, ODOT released their final COVID Monitoring Traffic Report, which indicated that statewide traffic levels were approximately back to "pre-COVID" levels (plus or minus 5%). Other local agencies in the area have anecdotally noted similar observations on the local street system. Additionally, the traffic counts were collected when Wilsonville schools were back to full-time, in-person attendance. Therefore, no COVID adjustment was applied to the traffic counts.

Figure 1 shows the Existing 2021 PM peak hour traffic volumes for the study intersections, along with the lane configurations and traffic control.

[2] Table 5-3/Figure 5-4 and Table 5-4/Figure 5-5, Wilsonville Transportation System Plan, Amended April 15, 2019.

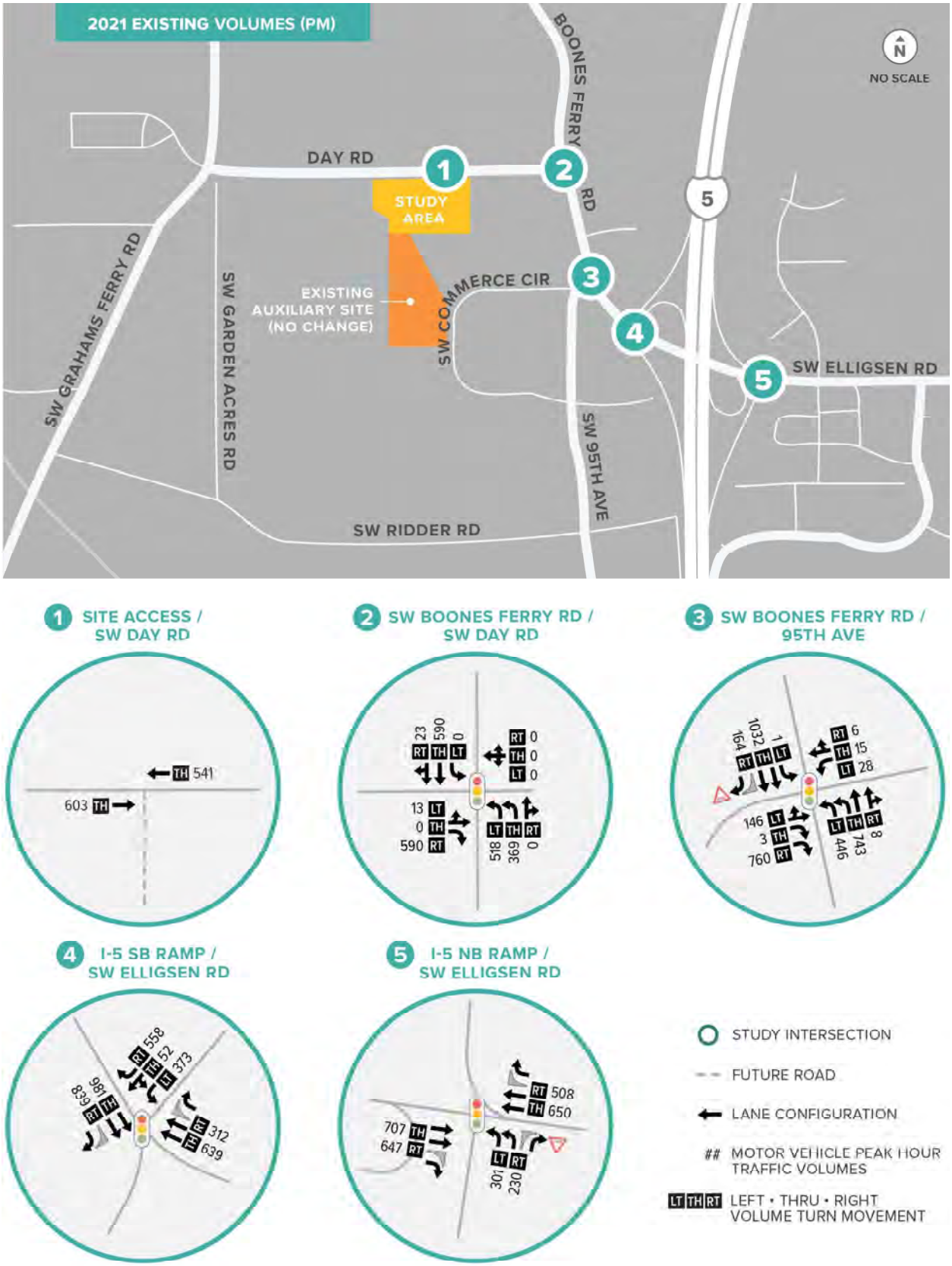

FIGURE 2: EXISTING PM PEAK HOUR TRAFFIC VOLUMES

INTERSECTION PERFORMANCE MEASURES

Agency mobility standards often require intersections to meet level of service (LOS) or volume-to-capacity (V/C) intersection operation thresholds.

- The intersection LOS is similar to a "report card" rating based upon average vehicle delay. Level of service A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. Level of service D and E are progressively worse operating conditions. Level of service F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity. This condition is typically evident in long queues and delays.

- The volume-to-capacity (v/c) ratio represents the level of saturation of the intersection or individual movement. It is determined by dividing the peak hour traffic volume by the maximum hourly capacity of an intersection or turn movement. When the V/C ratio approaches 0.95, operations become unstable and small disruptions can cause the traffic flow to break down, resulting in the formation of excessive queues.

The City of Wilsonville requires study intersections on public streets to meet its minimum acceptable level of service (LOS) standard, which is LOS D for the overall intersection for the PM peak period.

The two intersections located at the Interstate-5/Elligsen Road interchange are required to meet ODOT mobility targets, which are identified in the METRO Regional Transportation Plan (2018) and the Oregon Highway Plan (1999). For the I-5 corridor between the Marquam Bridge to Wilsonville, the PM peak hour target for the first and second hour is a v/c ratio equal to or less than 0.99.[3]

EXISTING INTERSECTION OPERATIONS

An analysis of the 2021 existing intersection operations was performed at the study intersections to determine the current operating conditions of the study area. Intersection operations were analyzed for the PM peak hour using Highway Capacity Manual (HCM) 6th Edition methodology.[4] The volume to capacity (v/c) ratio, delay, and level of service (LOS) of each study intersection are listed in Table 3.

[3] Table 2.4, Regional Transportation Plan, METRO, December 6, 2018.

Table 7, Oregon Highway Plan, Oregon Department of Transportation, 1999.

[4] Highway Capacity Manual, 6th Edition, Transportation Research Board, 2017.

TABLE 3: EXISTING 2021 STUDY INTERSECTION OPERATIONS

INTERSECTION	OPERATING STANDARD/ MOBILITY TARGET	EXISTING PM PEAK HOUR		
		V/C	DELAY	LOS
SIGNALIZED				
BOONES FERRY RD/ DAY RD	LOS D (City)	0.65	15.8	B
BOONES FERRY RD/ 95TH AVE	LOS D (City)	0.69	20.3	C
I-5 SOUTHBOUND RAMPS/ ELLIGSEN RD	v/c ≤ 0.99 (ODOT)	0.75	9.5	A
I-5 NORTHBOUND RAMPS/ ELLIGSEN RD	v/c ≤ 0.99 (ODOT)	0.33	7.2	A
TWO-WAY STOP- CONTROLLED				
SITE ACCESS/ DAY RD	LOS D (City)	-	-	-

SIGNALIZED INTERSECTION:
Delay = Average Intersection Delay (secs)
v/c = Total Volume-to-Capacity Ratio
LOS = Total Level of Service

TWO-WAY STOP CONTROLLED INTERSECTION:
Delay = Critical Movement Delay (secs)
v/c = Critical Movement Volume-to-Capacity Ratio
LOS = Critical Levels of Service (Major/Minor Road)

As shown, all study intersections meet the City's operating standard under the existing analysis scenario. HCM reports are provided in the appendix.

PROJECT IMPACTS

This chapter reviews the impacts that the proposed development may have on the study area transportation system. This analysis includes trip generation and distribution estimates, future year traffic volumes, and operating conditions for the study intersections.

PROPOSED DEVELOPMENT

The proposed Delta Logistics Annex industrial development is located at 9710 Day Road in Wilsonville, Oregon. The project will consist of an approximately 56,100 square foot industrial building which will have direct access to Day Road. The development serves as an annex to the existing operations of Delta Logistics at 9835 SW Commerce Circle and will include an internal connection between the two sites. The project site is located within the Wilsonville Coffee Creek Industrial Design Overlay Zone.

FUTURE ANALYSIS SCENARIOS

Operating conditions were analyzed at the study intersections for the following traffic scenarios. The comparison of the following scenarios enables the assessment of project impacts:

- Existing + Stage II
- Existing + Project
- Existing + Stage II + Project

All future analysis scenarios assume the same traffic control as existing conditions. Stage II represents traffic from other developments that have Stage II approval or are under construction in Wilsonville.

TRIP GENERATION

Trip generation is the method used to estimate the number of vehicles added to site driveways and the adjacent roadway network by a development during a specified period (i.e., such as the PM peak hour).

For this study, the Institute of Transportation Engineers (ITE) trip generation rates for Warehousing (150) were used.[5] This ITE land use code was deemed appropriate through a comparison of the Warehousing (150) trip generation rate with a weekday PM peak hour driveway count that was collected at the existing auxiliary site access for Delta Logistics. The traffic count showed a similar traffic generation as would be expected for the Warehousing (150) land use code, which validates that the land use code would be acceptable for the new site. The total trip generation for the proposed development is shown in Table 4.

[5] Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, 2021.

TABLE 4: VEHICLE TRIP GENERATION

LAND USE (ITE CODE)	SIZE [a]	PM PEAK TRIP RATE	PM PEAK TRIPS			DAILY TRIPS
			IN	OUT	TOTAL	
Warehousing (150)	56.1 KSF	1.20 trips per KSF	9	24	33	127

[a] KSF = 1,000 square feet

As shown, the proposed development is expected to generate a total 33 PM peak hour trips (9 in, 24 out). The project trips at the study intersections are shown in Figure 2 in the following section.

VEHICLE TRIP DISTRIBUTION

Vehicle trip distribution provides an estimation of where vehicles would be coming from and going to. It is given as a percentage at key gateways to the study area and is used to route project trips through the study intersections. Figure 3 shows the trip distribution for the proposed site. The trip distribution was based on the Wilsonville Travel Demand Model[6] and matched prior studies conducted near the project vicinity.[7]

Due to study site having an internal access point to the existing auxiliary site, the vehicle trips that originated south along 95th Avenue were routed through the existing auxiliary site access on Commerce Circle. With 15% of trips on 95th Avenue, this equated to 4 trips out and 1 trip in during the PM peak hour in which the generated vehicles do not interact with a study intersection.

PROJECT TRIPS THROUGH CITY OF WILSONVILLE INTERCHANGE AREAS

The project trips through the two City of Wilsonville I-5 interchange areas were estimated based on the trip generation and distribution assumptions as discussed prior. Approximately 5% of the project trips are expected to travel through the I-5/Wilsonville Road interchange area and 45% are expected to travel through the I-5/Elligsen Road interchange area; that is, the proposed development is expected to generate 2 new PM peak hour trips through the I-5/Wilsonville Road interchange area and 15 new PM peak hour trips through the I-5/Elligsen Road interchange area.

FUTURE TRAFFIC VOLUMES

Traffic volumes were estimated at the study intersections for the three future analysis scenarios. The future scenarios include various combinations of three types of traffic: Existing, Project, and Stage II. Stage II development trips are estimated based on the list of currently approved Stage II developments provided by City staff.[8] The Stage II list is included in the appendix. Figure 4 shows the PM peak hour traffic volumes used to analyze the future scenarios.

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[6] 2035 Wilsonville Travel Demand Model, Select Zone Analysis, Zone 4143.

[7] Coffee Creek Industrial Development, Transportation Impact Study, DKS Associates, November 2021.

[8] Daniel Pauly Email, City of Wilsonville, September 21, 2021.

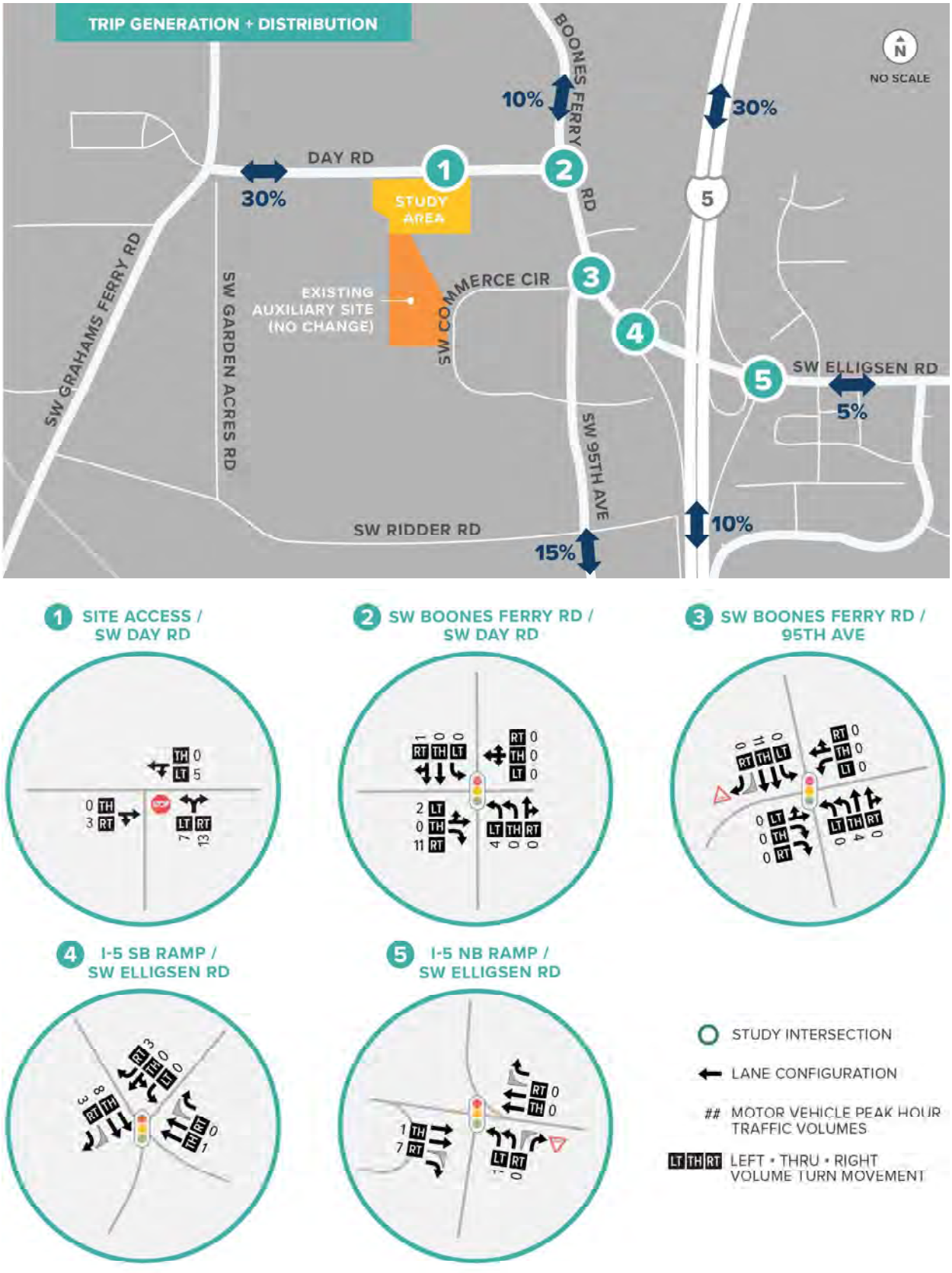


FIGURE 3: TRIP DISTRIBUTION AND PROJECT TRIPS

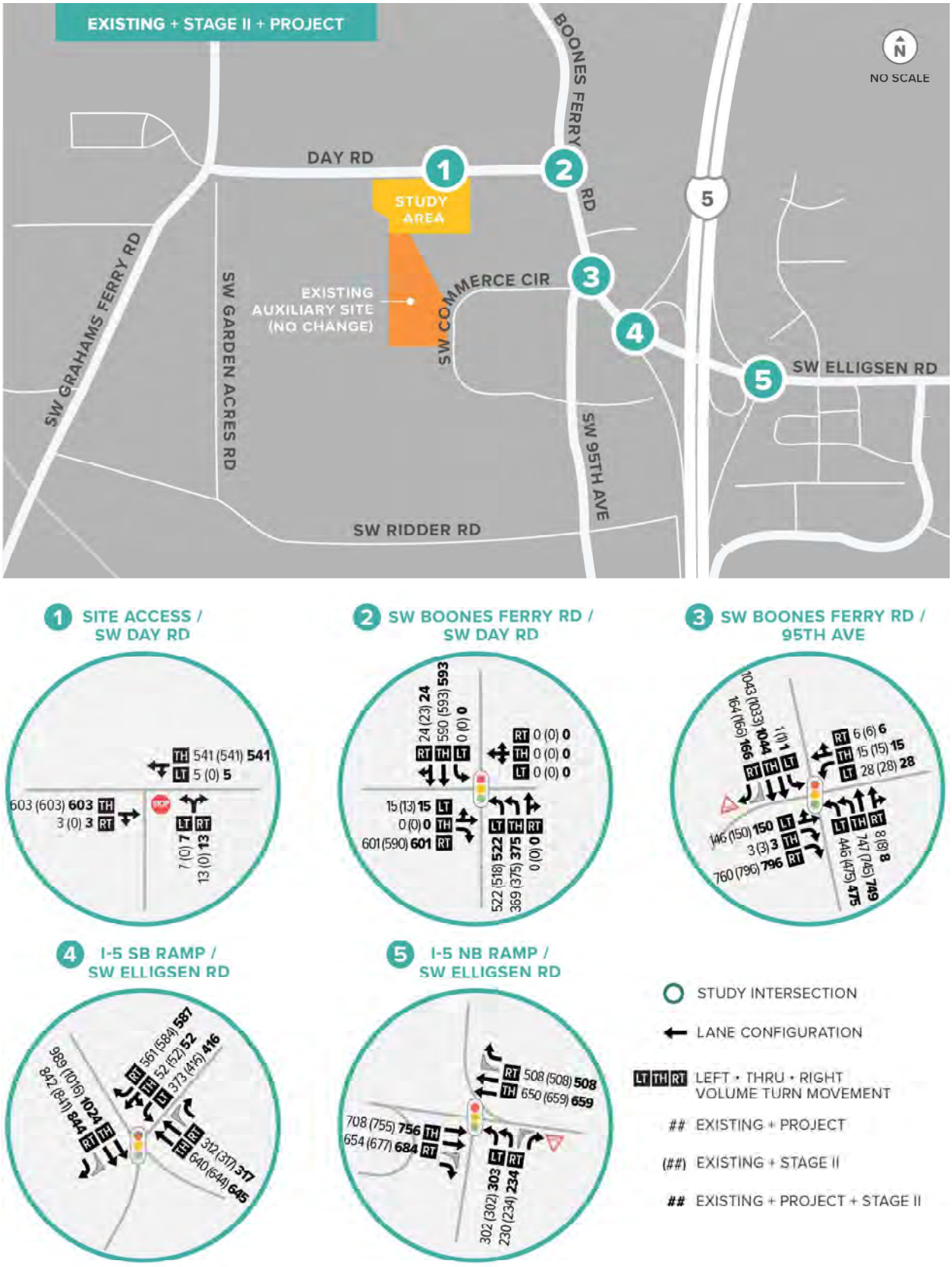


FIGURE 4: FUTURE PM PEAK HOUR TRAFFIC VOLUMES

FUTURE INTERSECTION OPERATIONS

An analysis of the future intersection operations was performed at the study intersections for each future scenario. Intersection operations were analyzed for the PM peak hour using Highway Capacity Manual (HCM) 6th Edition methodology.[9] The volume to capacity (v/c) ratio, delay, and level of service (LOS) of each study intersection are listed in Table 5.

TABLE 5: FUTURE INTERSECTION OPERATIONS

INTERSECTION	OPERATING STANDARD/ MOBILITY TARGET	EXISTING + PROJECT			EXISTING + STAGE II			EXISTING + STAGE II + PROJECT		
		V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS
SIGNALIZED										
BOONES FERRY RD/ DAY RD	LOS D (City)	0.66	16.0	B	0.66	15.8	B	0.67	16.0	B
BOONES FERRY RD/ 95TH AVE	LOS D (City)	0.70	20.4	C	0.71	20.6	C	0.71	20.7	C
I-5 SOUTHBOUND RAMPS/ ELLIGSEN RD	v/c ≤ 0.99 (ODOT)	0.76	9.6	A	0.79	10.3	B	0.79	10.4	B
I-5 NORTHBOUND RAMPS/ ELLIGSEN RD	v/c ≤ 0.99 (ODOT)	0.33	7.2	A	0.35	7.2	A	0.35	7.2	A
TWO-WAY STOP- CONTROLLED										
SITE ACCESS/ DAY RD	LOS D (City)	0.06	14.5	A/B	-	-	-	0.06	14.5	A/B

SIGNALIZED INTERSECTION:
Delay = Average Intersection Delay (secs)
v/c = Total Volume-to-Capacity Ratio
LOS = Total Level of Service

TWO-WAY STOP CONTROLLED INTERSECTION:
Delay = Critical Movement Delay (secs)
v/c = Critical Movement Volume-to-Capacity Ratio
LOS = Critical Levels of Service (Major/Minor Road)

As shown, all study intersections are expected to meet the City's operating standard under all future analysis scenarios. HCM reports are provided in the appendix.

SITE REVIEW

This chapter provides a documented evaluation of the site plan, including discussions on the site access and sight distance, frontage improvements, pedestrian and bicycle facilities, circulation, and parking. The site plan is provided in the appendix.

SITE ACCESSES

A full site access is currently proposed on Day Road approximately 1,200 feet west of the Boones Ferry Road intersection. Also shown is an internal connection to the auxiliary site property to the

[9] Highway Capacity Manual, 6th Edition, Transportation Research Board, 2017.

south, which has access to Commerce Circle. The full site access on Day Road will support both employee passenger vehicle traffic and freight truck traffic. The proposed access on Day Road is required to meet the City's public works construction standards.[10] The access spacing standard for a Major Arterial is to be a minimum 1,000 feet, but the desired spacing is 1,320 feet.

The approximate spacing between the proposed site access and the Boones Ferry Road intersection is 1,000 feet, meeting the City's minimum standard. However, as shown in the City's Development Code for the Coffee Creek Industrial Design Overlay Zone[11], there is a proposed Supporting Street connection to Day Road that is proposed to be built just to the east of the project property, approximately 420 feet from the proposed driveway. Ideally, the site would be able to connect directly to the future Supporting Street, but because of the existing wetlands and the Significant Resource Overlay Zone (SROZ) on the west side of the property, access to the proposed Supporting Street is not feasible and therefore, a direct access to Day Road is necessary.

INTERSECTION SIGHT DISTANCE

The proposed driveway is to meet the recommend sight distances per AASHTO[12]. The posted speed on Day Road is 40 mph and there is a 5% uphill grade traveling eastbound and a 2% uphill grade traveling westbound from the proposed driveway. Based on these conditions, the preliminary intersection sight distance requirement along Day Road is shown in the table below.

TABLE 6: PRELIMINARY INTERSECTION SIGHT DISTANCE (ISD) PER AASHTO

DIRECTION OF TRAVEL	DESIGN SPEED	PASSENGER CAR	TRUCK
Left Turn From Driveway	40 mph	530 ft	780 ft
Right Turn From Driveway		475 ft	720 ft
DKS PRELIMINARY FIELD MEASUREMENTS:			
Looking to the Left: approximately 750 feet		✓	✗
Looking to the Right: approximately 600 feet		✓	✓

Sight distance was evaluated and documented in a memo by Mackenzie that verified sight distances at the proposed driveway are met for passenger cars but not for trucks.[13] A field visit

[10] Table 2.12 Public Works Construction Standards, City of Wilsonville, 2017.

[11] Wilsonville Development Code, Section 4.134.

[12] Table 9-7 and 9-9, A Policy on Geometric Design of Highways and Streets, 7th Edition, American Association of State Highway and Transportation Officials (AASHTO), 2018 with 2019 Errata.

[13] Delta Logistics – Wilsonville Annexation, Day Road Sight Distance Evaluation, Makenzie, March 18, 2021.

conducted by DKS also verified the same sight distance findings at the proposed site access as Mackenzie.[14]

In January 2022, Makenzie evaluated the intersection sight distances at three alternative driveway locations along Day Road at both a 35 mph and 40 mph design speed to determine if recommended sight distances could be met at any of the other locations and at a lower posted speed. However, due to the vertical curve on Day Road, none of the other driveway locations were able to meet recommended intersection sight distances.

Based on these findings, DKS recommends that the proposed driveway be provided as shown on the site plan. Trucks desiring to head west on Day Road will need to utilize to the existing site access to the site on SW Commerce Circle. Appropriate coordination with truck drivers and signage will need to be installed on site to prohibits trucks from turning left out of the Day Road driveway.

Prior to occupancy, sight distance at any new or modified access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon.

FRONTAGE IMPROVEMENTS

Based on the City's street cross-section design standards,[15] major arterials are required to have sidewalks, planter strips, and bike lanes along the project frontage. As sidewalks, planter strips, and bike lanes already exist along the project frontage, the project sponsor should verify that the existing facilities meet the facility width requirements.

CIRCULATION & STRUCTURE

As an industrial warehousing and trucking site, there is the necessity for substantial semi-truck tractor and trailer parking. The site separates out the personal vehicle, semi-tractor, and semi-trailer parking into three areas. The passenger car parking areas are located on the south side of the property and along the north side of the building. Semi-trailer parking is located just west of the building at the center of the property and semi-tractor parking is located on the far west side of the property. A circular isle is provided around the semi-trailer parking area that connects the Day Road access, internal access to the auxiliary site, and loading dock doors.

The semi-tractor parking area on the west end of the property is accessed a drive aisle that is shown to cross over a Significant Resource Overlay Zone (SROZ). While the parking area appears to be outside of the SROZ, the access road to reach the parking area would require building the access road within the SROZ. Based on discussions with the City, it is our understanding that a crossing over the SROZ will not be permitted and therefore, the proposed semi-tractor parking should be relocated elsewhere on the project site.

[14] Field visit conducted by DKS Associates on October 27, 2021.

[15] Wilsonville Transportation System Plan, Amended November 16, 2020.

PARKING

The proposed project is required to comply with the City code for the number of personal vehicular parking stalls and bicycle parking spaces that are provided on site.[16] Assuming the entire building is classified as Storage Warehouse, the project site is to have between 0.3 and 0.5 vehicle parking spaces per 1,000 square feet of building, which equates to between 17 and 29 spaces. The site plan shows a proposed 56 vehicular parking spaces, exceeding the maximum number of parking stalls per code for Storage Warehouse land use.

Based on the ITE Parking Generation Manual, the 85th percentile parking demand for Land Use 150 (Warehousing) is 0.81 parking stalls per 1,000 square feet of building. This results in an estimated parking demand of 47 parking stalls for the project site. Because the project site is anticipated to be a distribution center, it will need to provide enough parking for the truck/freight drivers' personal vehicles as well as on-site employees' personal vehicles. The proposed 56 parking passenger car spaces is appropriate for this project site.

This industrial site is also to have one bicycle parking space per 20,000 square feet, which equates to three bicycle parking spots. The site plan does not show any proposed bicycle parking spaces. It is recommended that the final site plan show a minimum of three bicycle parking spaces to meet the City code requirement.

SUMMARY OF PROJECT IMPACTS

The key findings of the study for the Delta Logistics Annex development are discussed below.

- The proposed Delta Logistics Annex industrial development includes an approximately 56,100 square foot industrial building that will serve as an annex to the existing operations of Delta Logistics located on Commerce Circle.
- The proposed development is expected to generate 33 PM peak hour trips (9 in, 24 out) and 127 weekday trips.
- Of the PM peak hour project trips, 2 new trips are expected to travel through the I-5/ Wilsonville Road interchange area and 15 new trips are expected to travel through the I-5/ Elligsen Road interchange area.
- The traffic operations at the five study intersections are expected to operate within the City's operating standard and ODOT's mobility target under project build conditions.
- The proposed site driveway does not meet access spacing standards nor the recommended intersection sight distances for trucks turning left out of the driveway. However, based on the intersection sight distance evaluation, the proposed driveway location provides the best intersection sight distance as compared to other locations along Day Road.

[16] Wilsonville Development Code, Section 4.155, Table 5, Updated October 2019.

- A condition of approval will be needed to prohibit trucks from turning left onto Day Road. Trucks desiring to head west on Day Road will need to utilize to the existing site access on SW Commerce Circle. Appropriate coordination with truck drivers and internal signage will need to be installed on site to prohibits trucks from turning left out of the Day Road site driveway. Prior to occupancy, sight distance at any new or modified access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon.
- Based on discussions with the City, it is our understanding that a crossing over the SROZ will not be permitted and therefore, the proposed parking lot on the west side of the site should be relocated.
- It is recommended that the final site plan includes a minimum of three bicycle parking spaces to meet the City code requirement.

APPENDIX

CONTENTS

APPENDIX A

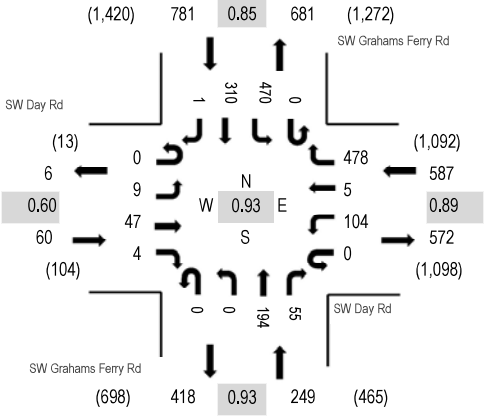
TRAFFIC COUNT DATA

(303) 216-2439
www.alltrafficdata.net

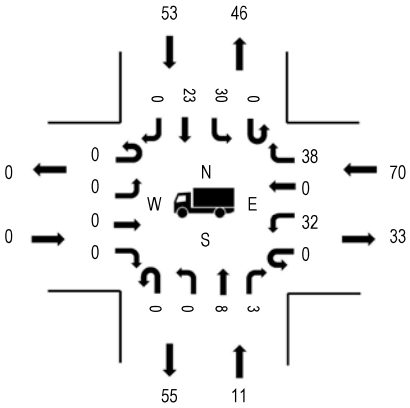
Location: 1 SW Grahams Ferry Rd & SW Day Rd PM
Date: Tuesday, September 21, 2021
Study Peak Hour: 04:10 PM - 05:10 PM
Peak 15-Minutes in Study Peak Hour: 04:35 PM - 04:50 PM

Study Peak Hour (for all study intersections)

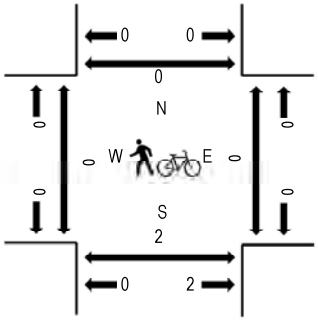
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.60
WB	11.9%	0.89
NB	4.4%	0.93
SB	6.8%	0.85
All	8.0%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Day Rd Eastbound				SW Day Rd Westbound				SW Grahams Ferry Rd Northbound				SW Grahams Ferry Rd Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	1	18	2	0	6	0	44	0	0	7	5	0	42	20	1	146	1,696
4:05 PM	0	2	4	0	0	5	0	30	0	0	15	4	0	32	25	0	117	1,660
4:10 PM	0	0	4	0	0	4	0	38	0	0	18	1	0	53	36	0	154	1,677
4:15 PM	0	0	6	0	0	5	1	38	0	0	14	3	0	34	31	0	132	1,661
4:20 PM	0	1	4	1	0	8	0	53	0	0	12	7	0	50	19	0	155	1,641
4:25 PM	0	2	8	0	0	6	0	42	0	0	22	9	0	36	15	0	140	1,630
4:30 PM	0	0	5	1	0	10	0	46	0	0	10	3	0	39	18	0	132	1,618
4:35 PM	0	1	8	0	0	8	1	41	0	0	19	3	0	39	27	0	147	1,600
4:40 PM	0	2	3	0	0	7	0	29	0	0	20	8	0	46	31	0	146	1,542
4:45 PM	0	1	2	0	0	19	1	41	0	0	9	6	0	41	35	1	156	1,510
4:50 PM	0	1	4	0	0	5	0	35	0	0	17	4	0	39	36	0	141	1,477
4:55 PM	0	0	1	1	0	14	1	40	0	0	18	3	0	32	20	0	130	1,433
5:00 PM	0	0	1	1	0	9	0	38	0	0	10	4	0	31	16	0	110	1,385
5:05 PM	0	1	1	0	0	9	1	37	0	0	25	4	0	30	26	0	134	
5:10 PM	0	1	1	1	0	4	0	43	0	0	11	4	0	46	27	0	138	
5:15 PM	0	0	0	0	0	6	1	32	0	0	20	7	0	27	19	0	112	
5:20 PM	0	0	1	1	0	5	1	35	0	0	20	3	0	56	22	0	144	
5:25 PM	0	0	1	0	0	6	0	41	0	1	17	6	0	36	20	0	128	
5:30 PM	0	0	3	1	0	7	0	37	0	0	12	7	0	32	15	0	114	
5:35 PM	0	0	0	0	0	1	0	32	0	0	7	6	0	25	18	0	89	
5:40 PM	0	0	1	0	0	2	0	44	0	0	17	3	0	34	13	0	114	
5:45 PM	0	1	3	0	0	11	0	44	0	0	8	7	0	39	9	1	123	
5:50 PM	0	0	1	0	0	10	0	30	0	0	6	3	0	39	8	0	97	
5:55 PM	0	0	0	1	0	7	2	19	0	0	15	5	0	25	8	0	82	
Count Total	0	14	80	10	0	174	9	909	0	1	349	115	0	903	514	3	3,081	
Peak Hour	0	9	47	4	0	104	5	478	0	0	194	55	0	470	310	1	1,677	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

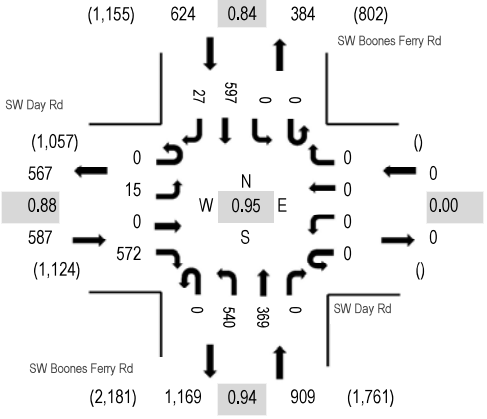
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	1	11	9	21	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	5	7	7	19	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	3	6	9	18	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	1	7	7	15	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	2	5	4	11	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	8	4	12	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	1	7	4	12	4:30 PM	0	0	1	0	1	4:30 PM	0	0	0	0	0
4:35 PM	0	2	5	6	13	4:35 PM	0	0	0	0	0	4:35 PM	0	1	0	0	1
4:40 PM	0	0	1	3	4	4:40 PM	0	0	0	0	0	4:40 PM	0	1	0	0	1
4:45 PM	0	1	11	6	18	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	5	6	11	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	8	0	8	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	1	4	2	7	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	3	2	5	5:05 PM	0	0	0	1	1	5:05 PM	0	0	0	0	0
5:10 PM	0	0	5	2	7	5:10 PM	0	0	1	0	1	5:10 PM	0	0	0	0	0
5:15 PM	0	1	5	1	7	5:15 PM	0	1	0	0	1	5:15 PM	0	0	0	0	0
5:20 PM	0	0	2	1	3	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	2	2	4	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	1	4	2	7	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	1	2	3	6	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	1	3	2	6	5:40 PM	0	0	0	1	1	5:40 PM	0	0	0	0	0
5:45 PM	0	1	1	4	6	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	1	4	0	5	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	3	3	0	6	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	26	119	86	231	Count Total	0	1	2	2	5	Count Total	0	2	0	0	2
Peak Hour	0	11	70	53	134	Peak Hour	0	0	1	1	2	Peak Hour	0	2	0	0	2

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

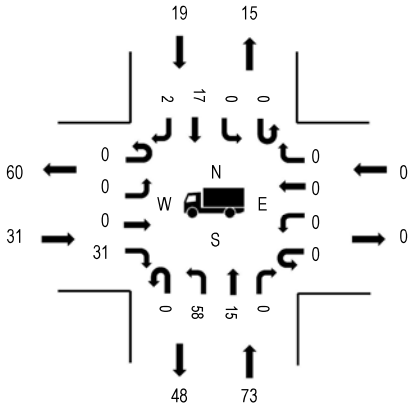
Location: 2 SW Boones Ferry Rd & SW Day Rd PM
Date: Tuesday, September 21, 2021
Study Peak Hour: 04:10 PM - 05:10 PM
Peak 15-Minutes in Study Peak Hour: 04:35 PM - 04:50 PM

Study Peak Hour (for all study intersections)

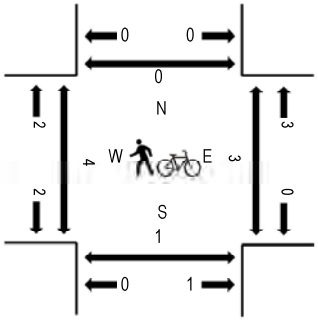
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	5.3%	0.88
WB	0.0%	0.00
NB	8.0%	0.94
SB	3.0%	0.84
All	5.8%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Day Rd Eastbound				SW Day Rd Westbound				SW Boones Ferry Rd Northbound				SW Boones Ferry Rd Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	2	0	64	0	0	0	0	0	30	21	0	0	0	35	6	158	2,101
4:05 PM	0	1	0	50	0	0	0	0	0	43	23	0	0	0	44	4	165	2,100
4:10 PM	0	1	0	50	0	0	0	0	0	42	32	0	0	0	58	3	186	2,120
4:15 PM	0	1	0	47	0	0	0	0	0	37	32	0	0	0	63	2	182	2,094
4:20 PM	0	1	0	54	0	0	0	0	0	51	23	0	0	0	55	5	189	2,072
4:25 PM	0	1	0	60	0	0	0	0	0	53	28	0	0	0	32	4	178	2,064
4:30 PM	0	4	0	46	0	0	0	0	0	45	30	0	0	0	42	2	169	2,040
4:35 PM	0	0	0	50	0	0	0	0	0	46	37	0	0	0	41	2	176	2,026
4:40 PM	0	3	0	49	0	0	0	0	0	47	38	0	0	0	42	1	180	1,999
4:45 PM	0	0	0	48	0	0	0	0	0	31	31	0	0	0	68	1	179	1,999
4:50 PM	0	0	0	37	0	0	0	0	0	49	33	0	0	0	47	3	169	1,988
4:55 PM	0	2	0	60	0	0	0	0	0	38	18	0	0	0	51	1	170	1,973
5:00 PM	0	0	0	35	0	0	0	0	0	46	28	0	0	0	45	3	157	1,939
5:05 PM	0	2	0	36	0	0	0	0	0	55	39	0	0	0	53	0	185	
5:10 PM	0	1	0	46	0	0	0	0	0	39	30	0	0	0	40	4	160	
5:15 PM	0	2	0	35	0	0	0	0	0	34	33	0	0	0	54	2	160	
5:20 PM	0	0	0	54	0	0	0	0	0	43	33	0	0	0	45	6	181	
5:25 PM	0	1	0	50	0	0	0	0	0	40	25	0	0	0	35	3	154	
5:30 PM	0	0	0	40	0	0	0	0	0	41	43	0	0	0	31	0	155	
5:35 PM	0	2	0	29	0	0	0	0	0	35	34	0	0	0	48	1	149	
5:40 PM	0	3	0	36	0	0	0	0	0	53	40	0	0	0	46	2	180	
5:45 PM	0	1	0	46	0	0	0	0	0	35	44	0	0	0	39	3	168	
5:50 PM	0	5	0	39	0	0	0	0	0	33	41	0	0	0	35	1	154	
5:55 PM	0	2	0	28	0	0	0	0	0	28	31	0	0	0	43	4	136	
Count Total	0	35	0	1,089	0	0	0	0	0	994	767	0	0	0	1,092	63	4,040	
Peak Hour	0	15	0	572	0	0	0	0	0	540	369	0	0	0	597	27	2,120	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

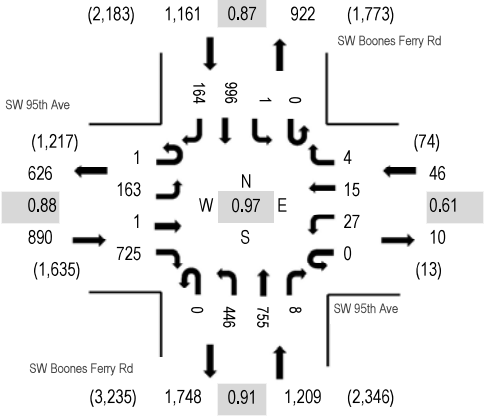
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	8	10	0	1	19	4:00 PM	0	1	0	0	1	4:00 PM	0	0	0	0	0
4:05 PM	3	7	0	1	11	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	3	7	0	2	12	4:10 PM	0	2	0	0	2	4:10 PM	0	0	1	0	1
4:15 PM	6	3	0	3	12	4:15 PM	0	2	0	1	3	4:15 PM	0	0	1	0	1
4:20 PM	1	5	0	2	8	4:20 PM	0	1	0	0	1	4:20 PM	0	0	0	0	0
4:25 PM	4	14	0	1	19	4:25 PM	0	0	0	1	1	4:25 PM	0	0	0	0	0
4:30 PM	3	5	0	0	8	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	2	3	0	1	6	4:35 PM	0	1	0	0	1	4:35 PM	0	0	1	0	1
4:40 PM	2	10	0	1	13	4:40 PM	0	1	0	0	1	4:40 PM	0	0	0	0	0
4:45 PM	2	5	0	3	10	4:45 PM	0	0	0	0	0	4:45 PM	2	1	0	0	3
4:50 PM	3	9	0	3	15	4:50 PM	0	0	0	1	1	4:50 PM	2	0	0	0	2
4:55 PM	2	3	0	1	6	4:55 PM	0	0	0	2	2	4:55 PM	0	0	0	0	0
5:00 PM	2	4	0	1	7	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	1	5	0	1	7	5:05 PM	0	0	0	1	1	5:05 PM	0	0	0	0	0
5:10 PM	1	5	0	0	6	5:10 PM	0	0	0	1	1	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1	5:15 PM	0	1	0	1	2	5:15 PM	0	0	0	0	0
5:20 PM	0	3	0	4	7	5:20 PM	0	1	0	0	1	5:20 PM	0	0	0	0	0
5:25 PM	2	1	0	1	4	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	2	5	0	0	7	5:30 PM	1	0	0	0	1	5:30 PM	0	0	0	0	0
5:35 PM	3	1	0	1	5	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	3	4	0	0	7	5:40 PM	0	1	0	0	1	5:40 PM	0	0	0	0	0
5:45 PM	3	2	0	1	6	5:45 PM	0	1	0	0	1	5:45 PM	0	0	0	0	0
5:50 PM	1	6	0	1	8	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	4	0	1	5	5:55 PM	0	2	0	0	2	5:55 PM	0	0	1	0	1
Count Total	57	121	0	31	209	Count Total	1	14	0	8	23	Count Total	4	1	4	0	9
Peak Hour	31	73	0	19	123	Peak Hour	0	7	0	6	13	Peak Hour	4	1	3	0	8

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

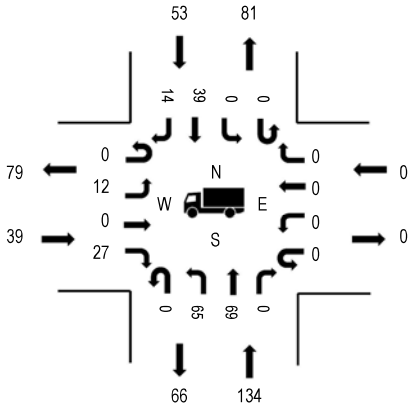
Location: 3 SW Boones Ferry Rd & SW 95th Ave PM
Date: Tuesday, September 21, 2021
Study Peak Hour: 04:10 PM - 05:10 PM
Peak 15-Minutes in Study Peak Hour: 04:35 PM - 04:50 PM

Study Peak Hour (for all study intersections)

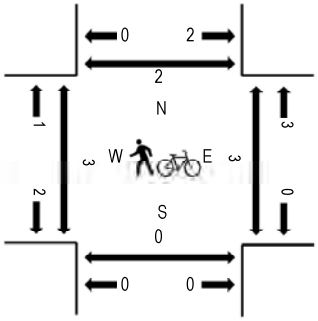
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.4%	0.88
WB	0.0%	0.61
NB	11.1%	0.91
SB	4.6%	0.87
All	6.8%	0.97

Traffic Counts - Motorized Vehicles

Interval Start Time	SW 95th Ave Eastbound				SW 95th Ave Westbound				SW Boones Ferry Rd Northbound				SW Boones Ferry Rd Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	11	0	55	0	2	1	0	0	41	43	1	0	0	82	17	253	3,293
4:05 PM	0	10	0	85	0	2	2	0	0	41	55	1	0	0	81	10	287	3,298
4:10 PM	0	18	0	77	0	2	2	0	0	26	59	2	0	0	78	11	275	3,306
4:15 PM	0	11	0	56	0	3	0	0	0	36	74	1	0	0	103	18	302	3,295
4:20 PM	0	16	0	62	0	1	1	0	0	36	50	0	0	0	95	17	278	3,249
4:25 PM	0	13	0	39	0	0	1	1	0	34	67	1	0	0	83	17	256	3,216
4:30 PM	0	16	0	62	0	3	0	0	0	39	66	2	0	0	73	16	277	3,233
4:35 PM	0	15	0	91	0	5	1	1	0	43	78	1	0	0	59	10	304	3,174
4:40 PM	0	15	0	50	0	0	1	0	0	29	56	0	0	0	101	6	258	3,096
4:45 PM	1	13	0	67	0	2	0	0	0	44	61	0	0	0	71	12	271	3,095
4:50 PM	0	9	1	48	0	0	5	0	0	27	65	1	0	1	97	11	265	3,063
4:55 PM	0	10	0	44	0	3	1	1	0	48	52	0	0	0	89	19	267	3,006
5:00 PM	0	14	0	57	0	7	1	1	0	42	54	0	0	0	65	17	258	2,945
5:05 PM	0	13	0	72	0	1	2	0	0	42	73	0	0	0	82	10	295	
5:10 PM	0	17	0	77	0	3	0	0	0	38	51	0	0	0	73	5	264	
5:15 PM	0	14	0	54	0	1	1	0	0	44	47	0	0	0	85	10	256	
5:20 PM	0	10	0	48	0	1	0	0	0	39	68	0	0	0	65	14	245	
5:25 PM	0	8	0	46	0	5	1	1	0	39	69	0	0	0	88	16	273	
5:30 PM	0	10	0	45	0	2	0	0	0	21	63	0	0	0	67	10	218	
5:35 PM	0	14	1	37	0	1	0	0	0	38	60	0	0	0	63	12	226	
5:40 PM	0	9	0	41	0	1	0	0	0	42	80	0	0	0	64	20	257	
5:45 PM	0	18	0	28	0	1	0	0	0	31	70	0	0	0	78	13	239	
5:50 PM	0	15	0	44	0	1	0	0	0	33	54	0	0	0	47	14	208	
5:55 PM	0	8	0	40	0	1	1	0	0	22	46	0	0	0	73	15	206	
Count Total	1	307	2	1,325	0	48	21	5	0	875	1,461	10	0	1	1,862	320	6,238	
Peak Hour	1	163	1	725	0	27	15	4	0	446	755	8	0	1	996	164	3,306	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

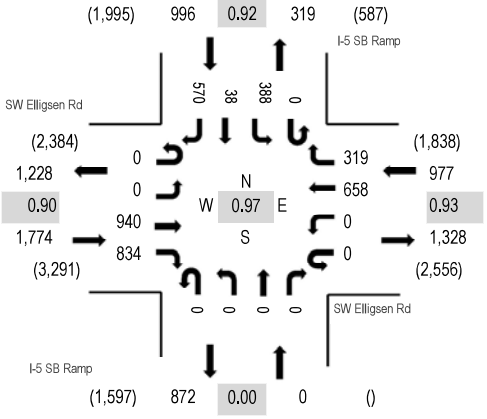
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	6	11	0	9	26	4:00 PM	0	1	0	1	2	4:00 PM	0	0	1	0	1
4:05 PM	1	7	0	3	11	4:05 PM	0	1	0	0	1	4:05 PM	1	0	0	0	1
4:10 PM	7	11	0	5	23	4:10 PM	2	1	0	0	3	4:10 PM	0	0	1	1	2
4:15 PM	5	11	0	9	25	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	3	7	0	3	13	4:20 PM	0	1	0	0	1	4:20 PM	0	0	1	0	1
4:25 PM	4	17	0	6	27	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	2	13	0	5	20	4:30 PM	0	1	0	0	1	4:30 PM	0	0	1	0	1
4:35 PM	3	10	0	4	17	4:35 PM	0	2	0	0	2	4:35 PM	1	0	0	1	2
4:40 PM	2	11	0	3	16	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	5	12	0	3	20	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	3	13	0	6	22	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	1	5	0	4	10	4:55 PM	0	0	0	0	0	4:55 PM	1	0	0	0	1
5:00 PM	3	11	0	2	16	5:00 PM	0	0	0	1	1	5:00 PM	1	0	0	0	1
5:05 PM	1	13	0	3	17	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	2	11	0	0	13	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	4	0	2	6	5:15 PM	1	0	0	0	1	5:15 PM	1	0	0	0	1
5:20 PM	3	8	0	1	12	5:20 PM	1	0	0	0	1	5:20 PM	0	0	0	0	0
5:25 PM	4	7	0	3	14	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	3	5	0	3	11	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	3	6	0	4	13	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	2	7	0	4	13	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	3	6	0	3	12	5:45 PM	2	0	0	0	2	5:45 PM	0	0	0	0	0
5:50 PM	1	5	0	0	6	5:50 PM	0	0	0	0	0	5:50 PM	1	0	0	1	2
5:55 PM	3	7	0	3	13	5:55 PM	0	2	0	0	2	5:55 PM	0	0	2	0	2
Count Total	70	218	0	88	376	Count Total	6	9	0	2	17	Count Total	6	0	6	3	15
Peak Hour	39	134	0	53	226	Peak Hour	2	5	0	1	8	Peak Hour	3	0	3	2	8

(303) 216-2439
www.alltrafficdata.net

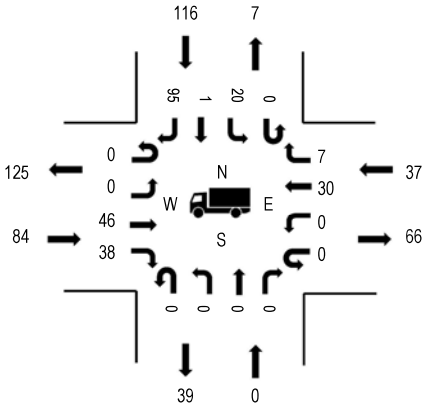
Location: 4 I-5 SB Ramp & SW Elligsen Rd PM
Date: Tuesday, September 21, 2021
Study Peak Hour: 04:10 PM - 05:10 PM
Peak 15-Minutes in Study Peak Hour: 04:35 PM - 04:50 PM

Study Peak Hour (for all study intersections)

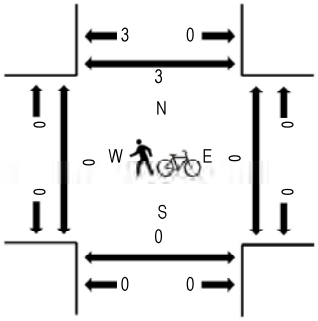
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.7%	0.90
WB	3.8%	0.93
NB	0.0%	0.00
SB	11.6%	0.92
All	6.3%	0.97

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Elligsen Rd Eastbound				SW Elligsen Rd Westbound				I-5 SB Ramp Northbound				I-5 SB Ramp Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	76	62	0	0	41	33	0	0	0	0	0	38	18	46	314	3,748
4:05 PM	0	0	103	73	0	0	50	23	0	0	0	0	0	33	4	50	336	3,740
4:10 PM	0	0	77	75	0	0	52	31	0	0	0	0	0	31	1	40	307	3,747
4:15 PM	0	0	98	73	0	0	74	33	0	0	0	0	0	27	3	35	343	3,739
4:20 PM	0	0	79	89	0	0	44	18	0	0	0	0	0	18	3	47	298	3,711
4:25 PM	0	0	69	61	0	0	40	19	0	0	0	0	0	36	1	62	288	3,687
4:30 PM	0	0	76	61	0	0	54	22	0	0	0	0	0	34	4	52	303	3,693
4:35 PM	0	0	99	59	0	0	66	26	0	0	0	0	0	26	4	47	327	3,669
4:40 PM	0	0	80	66	0	0	44	34	0	0	0	0	0	48	0	53	325	3,601
4:45 PM	0	0	77	71	0	0	55	24	0	0	0	0	0	37	2	48	314	3,568
4:50 PM	0	0	59	77	0	0	57	21	0	0	0	0	0	31	7	44	296	3,500
4:55 PM	0	0	75	67	0	0	53	26	0	0	0	0	0	27	2	47	297	3,438
5:00 PM	0	0	69	61	0	0	59	25	0	0	0	0	0	40	7	45	306	3,376
5:05 PM	0	0	82	74	0	0	60	40	0	0	0	0	0	33	4	50	343	
5:10 PM	0	0	95	61	0	0	49	25	0	0	0	0	0	29	6	34	299	
5:15 PM	0	0	74	72	0	0	45	28	0	0	0	0	0	37	7	52	315	
5:20 PM	0	0	55	61	0	0	55	29	0	0	0	0	0	27	1	46	274	
5:25 PM	0	0	58	76	0	0	50	11	0	0	0	0	0	38	2	59	294	
5:30 PM	0	0	66	61	0	0	61	30	0	0	0	0	0	24	0	37	279	
5:35 PM	0	0	57	47	0	0	62	18	0	0	0	0	0	32	0	43	259	
5:40 PM	0	0	70	40	0	0	60	13	0	0	0	0	0	53	0	56	292	
5:45 PM	0	0	60	46	0	0	43	17	0	0	0	0	0	32	0	48	246	
5:50 PM	0	0	58	39	0	0	38	13	0	0	0	0	0	34	0	52	234	
5:55 PM	0	0	58	49	0	0	39	28	0	0	0	0	0	21	0	40	235	
Count Total	0	0	1,770	1,521	0	0	1,251	587	0	0	0	0	0	786	76	1,133	7,124	
Peak Hour	0	0	940	834	0	0	658	319	0	0	0	0	0	388	38	570	3,747	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	11	0	5	12	28	4:00 PM	0	0	1	0	1	4:00 PM	0	1	0	1	2
4:05 PM	3	0	0	7	10	4:05 PM	0	0	0	1	1	4:05 PM	0	0	0	0	0
4:10 PM	8	0	5	9	22	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	11	0	4	8	23	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	1	1
4:20 PM	5	0	5	9	19	4:20 PM	0	0	1	0	1	4:20 PM	0	0	0	0	0
4:25 PM	6	0	3	12	21	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	1	1
4:30 PM	7	0	4	8	19	4:30 PM	0	0	1	1	2	4:30 PM	0	0	0	1	1
4:35 PM	5	0	2	7	14	4:35 PM	0	0	1	0	1	4:35 PM	0	0	0	0	0
4:40 PM	4	0	1	14	19	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	9	0	3	12	24	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	12	0	4	9	25	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	9	0	0	8	17	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	4	0	3	9	16	5:00 PM	1	0	0	0	1	5:00 PM	0	0	0	0	0
5:05 PM	4	0	3	11	18	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	2	0	4	5	11	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	0	2	7	10	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	8	0	0	6	14	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	6	0	1	3	10	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	3	0	2	5	10	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	7	0	3	5	15	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	3	0	5	3	11	5:40 PM	0	0	1	0	1	5:40 PM	0	0	0	0	0
5:45 PM	6	0	0	8	14	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	1	4	5	5:50 PM	0	0	0	0	0	5:50 PM	0	1	0	0	1
5:55 PM	5	0	5	7	17	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	139	0	65	188	392	Count Total	1	0	5	2	8	Count Total	0	2	0	4	6
Peak Hour	84	0	37	116	237	Peak Hour	1	0	3	1	5	Peak Hour	0	0	0	3	3

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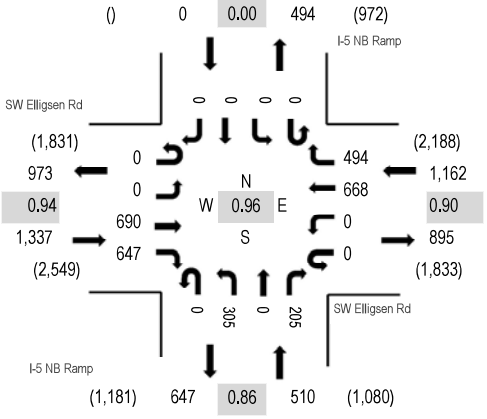
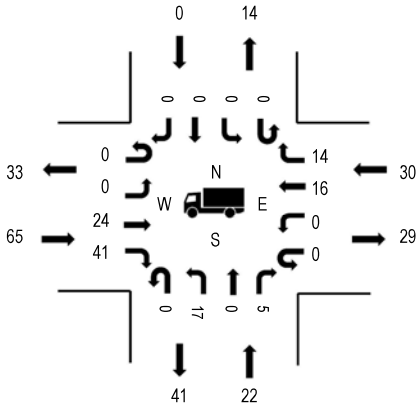
Location: 5 I-5 NB Ramp & SW Elligsen Rd PM
Date: Tuesday, September 21, 2021
Study Peak Hour: 04:10 PM - 05:10 PM
Peak 15-Minutes in Study Peak Hour: 04:35 PM - 04:50 PM

Study Peak Hour (for all study intersections)

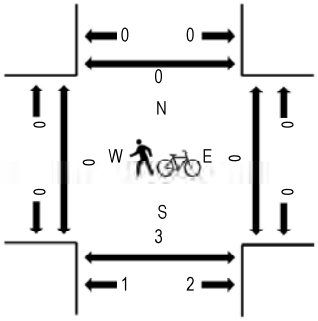
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.9%	0.94
WB	2.6%	0.90
NB	4.3%	0.86
SB	0.0%	0.00
All	3.9%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Elligsen Rd Eastbound				SW Elligsen Rd Westbound				I-5 NB Ramp Northbound				I-5 NB Ramp Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	56	60	0	0	49	48	0	24	0	23	0	0	0	0	260	3,018
4:05 PM	0	0	58	71	0	0	47	43	0	26	0	33	0	0	0	0	278	2,998
4:10 PM	0	0	45	63	0	0	60	34	0	24	0	25	0	0	0	0	251	3,009
4:15 PM	0	0	58	70	0	0	65	49	0	40	0	20	0	0	0	0	302	3,015
4:20 PM	0	0	46	56	0	0	43	22	0	19	0	21	0	0	0	0	207	2,950
4:25 PM	0	0	59	44	0	0	39	44	0	20	0	13	0	0	0	0	219	2,981
4:30 PM	0	0	64	44	0	0	53	47	0	23	0	16	0	0	0	0	247	2,974
4:35 PM	0	0	57	67	0	0	63	42	0	29	0	14	0	0	0	0	272	2,972
4:40 PM	0	0	60	48	0	0	53	41	0	25	0	20	0	0	0	0	247	2,932
4:45 PM	0	0	66	59	0	0	63	40	0	17	0	18	0	0	0	0	263	2,931
4:50 PM	0	0	66	37	0	0	52	31	0	24	0	17	0	0	0	0	227	2,890
4:55 PM	0	0	54	49	0	0	57	42	0	24	0	19	0	0	0	0	245	2,838
5:00 PM	0	0	66	43	0	0	51	43	0	31	0	6	0	0	0	0	240	2,799
5:05 PM	0	0	49	67	0	0	69	59	0	29	0	16	0	0	0	0	289	
5:10 PM	0	0	57	57	0	0	54	55	0	21	0	13	0	0	0	0	257	
5:15 PM	0	0	52	42	0	0	46	43	0	26	0	28	0	0	0	0	237	
5:20 PM	0	0	50	43	0	0	59	38	0	25	0	23	0	0	0	0	238	
5:25 PM	0	0	56	39	0	0	41	39	0	20	0	17	0	0	0	0	212	
5:30 PM	0	0	54	43	0	0	54	34	0	36	0	24	0	0	0	0	245	
5:35 PM	0	0	53	42	0	0	49	41	0	32	0	15	0	0	0	0	232	
5:40 PM	0	0	79	42	0	0	42	32	0	29	0	22	0	0	0	0	246	
5:45 PM	0	0	60	31	0	0	36	42	0	24	0	29	0	0	0	0	222	
5:50 PM	0	0	50	34	0	0	26	31	0	25	0	9	0	0	0	0	175	
5:55 PM	0	0	53	30	0	0	45	32	0	22	0	24	0	0	0	0	206	
Count Total	0	0	1,368	1,181	0	0	1,216	972	0	615	0	465	0	0	0	0	5,817	
Peak Hour	0	0	690	647	0	0	668	494	0	305	0	205	0	0	0	0	3,009	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	6	6	2	0	14	4:00 PM	0	0	1	0	1	4:00 PM	0	0	0	0	0
4:05 PM	2	2	2	0	6	4:05 PM	0	0	0	0	0	4:05 PM	0	1	0	0	1
4:10 PM	6	3	4	0	13	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	8	2	3	0	13	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	4	3	3	0	10	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	3	3	2	0	8	4:25 PM	0	0	0	0	0	4:25 PM	0	2	0	0	2
4:30 PM	5	3	4	0	12	4:30 PM	0	0	1	0	1	4:30 PM	0	0	0	0	0
4:35 PM	6	0	2	0	8	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	7	1	1	0	9	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	4	4	3	0	11	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	5	1	1	0	7	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	7	0	5	0	12	4:55 PM	0	0	0	0	0	4:55 PM	0	1	0	0	1
5:00 PM	3	1	2	0	6	5:00 PM	1	0	0	0	1	5:00 PM	0	0	0	0	0
5:05 PM	7	1	0	0	8	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	1	5	0	0	6	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	1	2	0	4	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	5	0	0	0	5	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	4	1	1	0	6	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	2	1	0	0	3	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	5	2	2	0	9	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	3	3	1	0	7	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	3	2	0	0	5	5:45 PM	0	0	0	0	0	5:45 PM	0	1	0	0	1
5:50 PM	1	1	0	0	2	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	3	3	3	0	9	5:55 PM	0	0	1	0	1	5:55 PM	0	0	0	0	0
Count Total	101	49	43	0	193	Count Total	1	0	3	0	4	Count Total	0	5	0	0	5
Peak Hour	65	22	30	0	117	Peak Hour	1	0	1	0	2	Peak Hour	0	3	0	0	3

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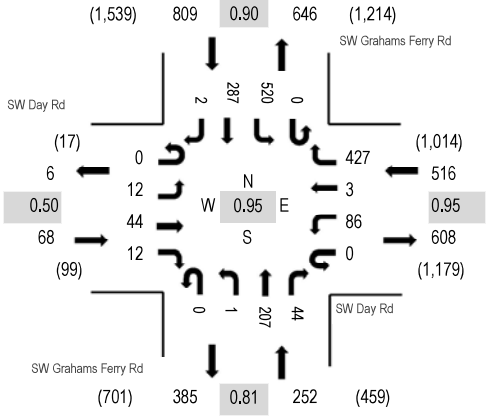
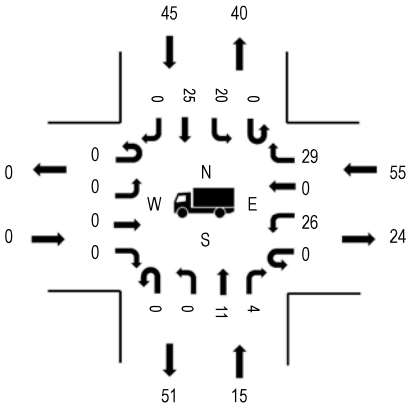
Location: 1 SW Grahams Ferry Rd & SW Day Rd PM
Date: Wednesday, September 22, 2021
Peak Hour: 04:05 PM - 05:05 PM
Peak 15-Minutes: 04:10 PM - 04:25 PM

Peak Hour

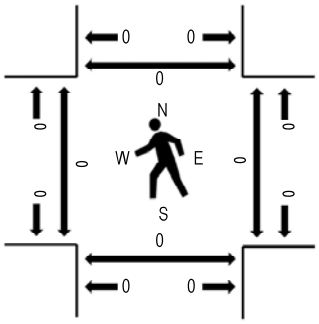
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.50
WB	10.7%	0.95
NB	6.0%	0.81
SB	5.6%	0.90
All	7.0%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Day Rd Eastbound				SW Day Rd Westbound				SW Grahams Ferry Rd Northbound				SW Grahams Ferry Rd Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	14	0	0	5	0	45	0	0	12	3	0	33	19	0	131	1,639
4:05 PM	0	3	10	2	0	9	0	39	0	0	13	3	0	27	19	1	126	1,645
4:10 PM	0	3	7	2	0	4	0	29	0	0	16	0	0	53	27	0	141	1,634
4:15 PM	0	1	3	1	0	9	0	49	0	0	20	5	0	44	23	0	155	1,624
4:20 PM	0	1	2	1	0	9	1	35	0	0	17	4	0	45	21	0	136	1,607
4:25 PM	0	1	0	0	0	8	0	27	0	0	20	5	0	44	30	0	135	1,623
4:30 PM	0	2	6	1	0	5	0	38	0	0	14	6	0	41	20	1	134	1,615
4:35 PM	0	1	5	1	0	5	0	28	0	0	17	4	0	41	25	0	127	1,607
4:40 PM	0	0	5	0	0	10	1	42	0	0	21	2	0	45	26	0	152	1,601
4:45 PM	0	0	0	2	0	9	0	27	0	0	29	6	0	46	18	0	137	1,556
4:50 PM	0	0	2	2	0	3	1	37	0	0	18	3	0	43	23	0	132	1,523
4:55 PM	0	0	4	0	0	11	0	42	0	0	11	2	0	37	26	0	133	1,508
5:00 PM	0	0	0	0	0	4	0	34	0	1	11	4	0	54	29	0	137	1,472
5:05 PM	0	0	0	0	0	3	0	39	0	0	14	4	0	34	21	0	115	
5:10 PM	0	0	0	0	0	5	0	37	0	0	13	6	0	45	25	0	131	
5:15 PM	0	0	3	0	1	6	2	26	0	0	15	7	0	56	22	0	138	
5:20 PM	0	0	2	0	0	5	0	38	0	0	11	10	0	52	34	0	152	
5:25 PM	0	0	2	0	0	7	1	44	0	1	11	5	0	36	20	0	127	
5:30 PM	0	0	3	0	0	3	0	38	0	0	13	7	0	38	24	0	126	
5:35 PM	0	0	2	1	0	8	2	33	0	0	8	4	0	39	24	0	121	
5:40 PM	0	0	2	0	0	4	1	29	0	0	16	5	0	36	14	0	107	
5:45 PM	0	0	0	0	0	6	0	31	0	1	14	2	0	32	18	0	104	
5:50 PM	0	0	1	0	0	5	3	39	0	0	6	2	0	43	18	0	117	
5:55 PM	0	0	1	0	0	7	0	25	0	0	11	6	0	35	12	0	97	
Count Total	0	12	74	13	1	150	12	851	0	3	351	105	0	999	538	2	3,111	
Peak Hour	0	12	44	12	0	86	3	427	0	1	207	44	0	520	287	2	1,645	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

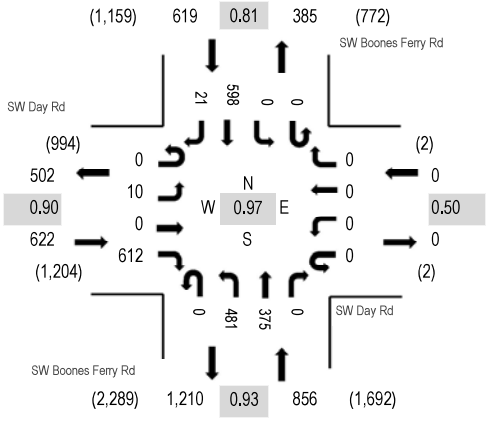
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	2	10	8	20	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	3	6	9	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	3	3	2	8	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	0	3	3	6	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	1	4	2	7	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	2	3	5	10	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	1	6	1	8	4:30 PM	0	0	0	1	1	4:30 PM	0	0	0	0	0
4:35 PM	0	2	4	4	10	4:35 PM	0	0	0	1	1	4:35 PM	0	0	0	0	0
4:40 PM	0	1	5	8	14	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	1	6	5	12	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	2	3	5	10	4:50 PM	0	0	0	1	1	4:50 PM	0	0	0	0	0
4:55 PM	0	1	11	2	14	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	1	4	2	7	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	1	3	1	5	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	3	4	7	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	2	2	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	3	2	5	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	5	4	9	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	1	1	0	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	1	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	1	3	1	5	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	2	3	5	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	1	1	3	5	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	2	2	4	8	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	23	88	78	189	Count Total	0	0	0	3	3	Count Total	0	0	0	0	0
Peak Hour	0	15	55	45	115	Peak Hour	0	0	0	3	3	Peak Hour	0	0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

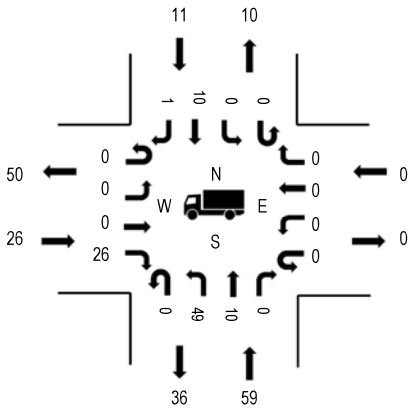
Location: 2 SW Boones Ferry Rd & SW Day Rd PM
Date: Wednesday, September 22, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:05 PM - 04:20 PM

Peak Hour

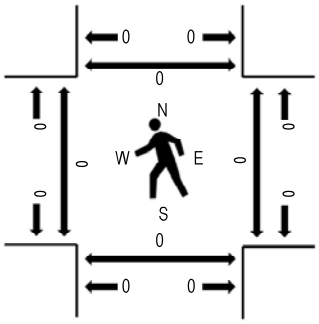
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.2%	0.90
WB	0.0%	0.50
NB	6.9%	0.93
SB	1.8%	0.81
All	4.6%	0.97

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Day Rd Eastbound				SW Day Rd Westbound				SW Boones Ferry Rd Northbound				SW Boones Ferry Rd Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	0	62	0	0	0	0	0	31	25	0	0	0	39	2	159	2,097
4:05 PM	0	1	0	47	0	0	0	0	0	49	31	0	0	0	52	3	183	2,085
4:10 PM	0	1	0	50	0	0	0	0	0	40	30	0	0	0	58	1	180	2,062
4:15 PM	0	1	0	40	0	0	0	0	0	32	28	0	0	0	74	3	178	2,054
4:20 PM	0	0	0	57	0	0	0	0	0	47	34	0	0	0	42	1	181	2,055
4:25 PM	0	2	0	53	0	0	0	0	0	35	39	0	0	0	38	3	170	2,040
4:30 PM	0	2	0	63	0	0	0	0	0	36	24	0	0	0	36	1	162	2,069
4:35 PM	0	1	0	50	0	0	0	0	0	44	38	0	0	0	44	1	178	2,064
4:40 PM	0	0	0	52	0	0	0	0	0	42	30	0	0	0	43	3	170	2,064
4:45 PM	0	1	0	48	0	0	0	0	0	37	33	0	0	0	55	0	174	2,041
4:50 PM	0	1	0	42	0	0	0	0	0	50	34	0	0	0	57	1	185	2,030
4:55 PM	0	0	0	48	0	0	0	0	0	38	29	0	0	0	60	2	177	1,986
5:00 PM	0	1	0	57	0	0	0	0	0	46	19	0	0	0	24	0	147	1,960
5:05 PM	0	0	0	39	0	0	0	0	0	43	35	0	0	0	38	5	160	
5:10 PM	0	0	0	55	0	0	1	0	0	44	28	1	0	0	41	2	172	
5:15 PM	0	1	0	61	0	0	0	0	0	31	31	0	0	0	55	0	179	
5:20 PM	0	4	0	43	0	0	0	0	0	32	26	0	0	0	59	2	166	
5:25 PM	0	2	0	57	0	0	0	0	0	54	38	0	0	0	46	2	199	
5:30 PM	0	0	0	43	0	0	0	0	0	34	35	0	0	0	43	2	157	
5:35 PM	0	2	0	45	0	0	0	0	0	37	37	0	0	0	53	4	178	
5:40 PM	0	1	0	49	0	0	0	0	0	33	22	0	0	0	42	0	147	
5:45 PM	0	4	0	30	0	0	0	0	0	52	30	0	0	0	46	1	163	
5:50 PM	0	2	0	44	0	0	0	0	1	30	38	0	0	0	24	2	141	
5:55 PM	0	3	0	39	0	0	0	1	0	32	27	0	0	1	45	3	151	
Count Total	0	30	0	1,174	0	0	1	1	1	949	741	1	0	1	1,114	44	4,057	
Peak Hour	0	10	0	612	0	0	0	0	0	481	375	0	0	0	598	21	2,097	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	5	3	0	3	11	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	2	4	0	1	7	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	1	0	2	3	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	1	4	0	1	6	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	4	0	3	7	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	3	6	0	0	9	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	1	6	0	0	7	4:30 PM	0	2	0	0	2	4:30 PM	0	0	0	0	0
4:35 PM	0	3	0	0	3	4:35 PM	0	0	0	0	0	4:35 PM	0	0	1	0	1
4:40 PM	5	11	0	0	16	4:40 PM	0	2	0	0	2	4:40 PM	0	0	0	0	0
4:45 PM	4	2	0	0	6	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	3	7	0	1	11	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	2	8	0	0	10	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	2	2	0	0	4	5:00 PM	0	1	0	0	1	5:00 PM	0	0	0	0	0
5:05 PM	1	4	0	1	6	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	1	1	0	0	2	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	4	0	1	6	5:15 PM	0	1	0	0	1	5:15 PM	0	0	0	0	0
5:20 PM	1	4	0	1	6	5:20 PM	0	0	0	1	1	5:20 PM	0	0	0	0	0
5:25 PM	2	7	0	1	10	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	1	2	0	1	4	5:30 PM	1	0	0	1	2	5:30 PM	0	0	0	0	0
5:35 PM	1	3	0	0	4	5:35 PM	0	1	0	0	1	5:35 PM	0	0	0	0	0
5:40 PM	1	4	0	0	5	5:40 PM	0	0	0	1	1	5:40 PM	1	0	0	0	1
5:45 PM	1	1	0	2	4	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	2	6	0	0	8	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	4	2	0	1	7	5:55 PM	0	0	0	1	1	5:55 PM	0	0	0	0	0
Count Total	44	99	0	19	162	Count Total	1	7	0	4	12	Count Total	1	0	1	0	2
Peak Hour	26	59	0	11	96	Peak Hour	0	4	0	0	4	Peak Hour	0	0	1	0	1

ALL TRAFFIC DATA SERVICES
(303) 216-2439
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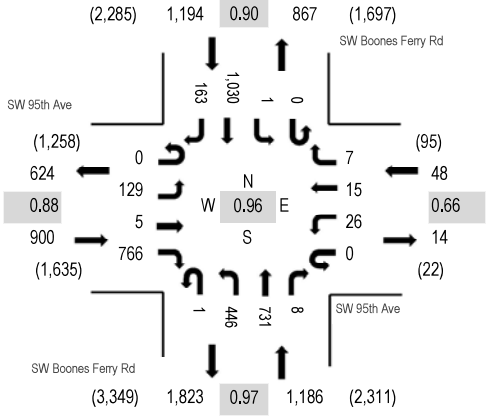
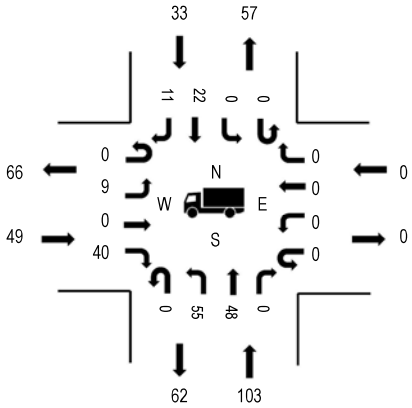
Location: 3 SW Boones Ferry Rd & SW 95th Ave PM
Date: Wednesday, September 22, 2021
Peak Hour: 04:05 PM - 05:05 PM
Peak 15-Minutes: 04:05 PM - 04:20 PM

Peak Hour

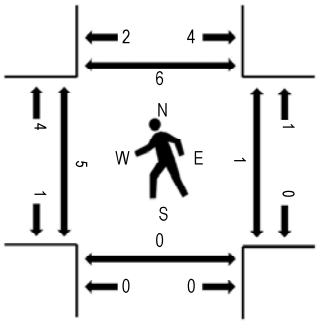
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	5.4%	0.88
WB	0.0%	0.66
NB	8.7%	0.97
SB	2.8%	0.90
All	5.6%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	SW 95th Ave Eastbound				SW 95th Ave Westbound				SW Boones Ferry Rd Northbound				SW Boones Ferry Rd Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	7	0	51	0	3	1	0	0	37	50	0	0	0	92	9	250	3,320
4:05 PM	0	16	3	75	0	1	4	0	0	47	58	0	0	0	74	19	297	3,328
4:10 PM	0	16	0	81	0	3	2	1	0	35	62	3	0	0	91	11	305	3,313
4:15 PM	0	7	0	50	0	1	2	0	0	40	60	0	0	0	87	20	267	3,266
4:20 PM	0	7	0	43	0	1	0	0	0	30	71	2	0	1	110	15	280	3,262
4:25 PM	0	10	0	52	0	4	0	0	0	35	66	0	0	0	77	17	261	3,242
4:30 PM	0	11	0	84	0	3	2	2	0	37	42	1	0	0	90	12	284	3,265
4:35 PM	0	10	0	76	0	1	0	2	0	47	77	0	0	0	83	5	301	3,205
4:40 PM	0	12	1	64	0	3	1	0	0	34	53	0	0	0	85	13	266	3,160
4:45 PM	0	11	0	68	0	1	1	0	0	19	64	1	0	0	90	10	265	3,138
4:50 PM	0	16	0	53	0	2	1	0	0	42	71	0	0	0	78	10	273	3,114
4:55 PM	0	9	0	57	0	3	1	0	1	38	58	1	0	0	87	16	271	3,058
5:00 PM	0	4	1	63	0	3	1	2	0	42	49	0	0	0	78	15	258	3,006
5:05 PM	0	24	1	71	0	5	2	2	0	29	56	1	0	0	78	13	282	
5:10 PM	0	16	0	63	0	4	4	0	0	34	47	2	0	0	77	11	258	
5:15 PM	0	9	0	53	0	4	0	0	0	38	56	1	0	0	84	18	263	
5:20 PM	0	21	0	52	0	2	5	0	0	34	51	0	0	0	81	14	260	
5:25 PM	0	13	0	41	0	3	0	1	0	37	73	0	0	0	96	20	284	
5:30 PM	0	9	0	40	0	0	0	1	0	33	50	2	0	0	76	13	224	
5:35 PM	0	7	0	44	0	1	0	1	0	38	65	0	0	0	83	17	256	
5:40 PM	0	7	0	45	0	3	0	0	0	41	51	0	0	0	83	14	244	
5:45 PM	0	17	0	39	0	1	0	0	1	49	64	0	0	0	59	11	241	
5:50 PM	0	15	0	44	0	3	0	0	0	45	44	0	0	0	53	13	217	
5:55 PM	0	18	0	28	0	1	0	0	0	40	55	1	0	0	62	14	219	
Count Total	0	292	6	1,337	0	56	27	12	2	901	1,393	15	0	1	1,954	330	6,326	
Peak Hour	0	129	5	766	0	26	15	7	1	446	731	8	0	1	1,030	163	3,328	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	4	7	1	8	20	4:00 PM	0	0	0	0	0	4:00 PM	1	0	0	0	1
4:05 PM	5	4	0	4	13	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	2	10	0	1	13	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	4	11	0	1	16	4:15 PM	0	0	0	0	0	4:15 PM	1	0	0	0	1
4:20 PM	4	8	0	3	15	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	1	1
4:25 PM	5	6	0	3	14	4:25 PM	0	0	0	0	0	4:25 PM	0	0	1	2	3
4:30 PM	10	9	0	1	20	4:30 PM	2	0	0	0	2	4:30 PM	1	0	0	1	2
4:35 PM	3	11	0	0	14	4:35 PM	0	0	0	0	0	4:35 PM	2	0	0	0	2
4:40 PM	6	11	0	4	21	4:40 PM	1	0	0	0	1	4:40 PM	0	0	0	1	1
4:45 PM	3	4	0	6	13	4:45 PM	0	0	0	0	0	4:45 PM	1	0	0	1	2
4:50 PM	6	12	0	1	19	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	1	12	0	6	19	4:55 PM	0	1	0	0	1	4:55 PM	0	0	0	0	0
5:00 PM	0	5	0	3	8	5:00 PM	0	0	0	0	0	5:00 PM	1	0	0	0	1
5:05 PM	3	6	0	2	11	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	4	6	0	0	10	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	8	0	2	10	5:15 PM	1	0	0	0	1	5:15 PM	0	0	0	0	0
5:20 PM	4	13	0	0	17	5:20 PM	0	0	0	1	1	5:20 PM	0	0	0	0	0
5:25 PM	5	5	0	3	13	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	5	3	0	2	10	5:30 PM	1	0	0	0	1	5:30 PM	0	0	0	0	0
5:35 PM	4	9	0	2	15	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	5	5	1	1	12	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	6	5	0	2	13	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	6	8	0	2	16	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	1	1
5:55 PM	4	2	0	5	11	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	99	180	2	62	343	Count Total	5	1	0	1	7	Count Total	7	0	1	7	15
Peak Hour	49	103	0	33	185	Peak Hour	3	1	0	0	4	Peak Hour	6	0	1	6	13

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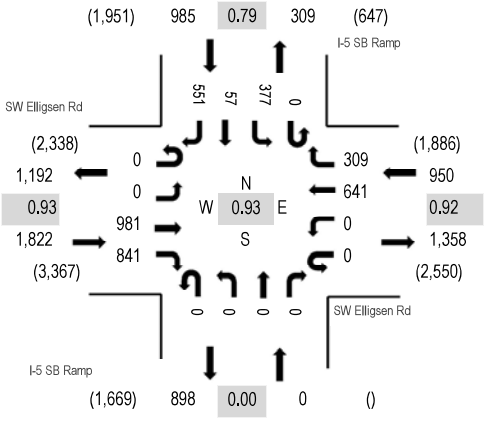
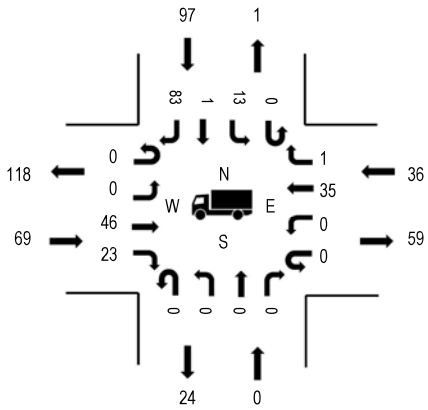
Location: 4 I-5 SB Ramp & SW Elligsen Rd PM
Date: Wednesday, September 22, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour

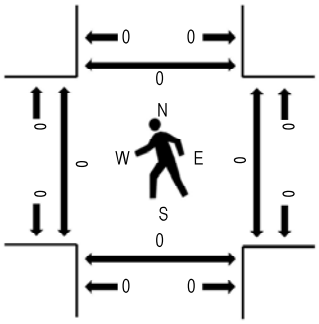
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	3.8%	0.93
WB	3.8%	0.92
NB	0.0%	0.00
SB	9.8%	0.79
All	5.4%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Elligsen Rd Eastbound				SW Elligsen Rd Westbound				I-5 SB Ramp Northbound				I-5 SB Ramp Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	74	72	0	0	41	26	0	0	0	0	0	47	8	53	321	3,757
4:05 PM	0	0	92	65	0	0	48	29	0	0	0	0	0	46	10	56	346	3,746
4:10 PM	0	0	97	77	0	0	55	23	0	0	0	0	0	37	13	43	345	3,709
4:15 PM	0	0	65	74	0	0	54	20	0	0	0	0	0	40	5	45	303	3,652
4:20 PM	0	0	76	71	0	0	60	31	0	0	0	0	0	24	8	50	320	3,655
4:25 PM	0	0	67	68	0	0	67	32	0	0	0	0	0	25	6	42	307	3,601
4:30 PM	0	0	108	61	0	0	50	28	0	0	0	0	0	34	0	37	318	3,622
4:35 PM	0	0	86	72	0	0	56	31	0	0	0	0	0	13	0	47	305	3,585
4:40 PM	0	0	86	78	0	0	40	31	0	0	0	0	0	25	1	54	315	3,573
4:45 PM	0	0	75	73	0	0	59	17	0	0	0	0	0	31	1	32	288	3,553
4:50 PM	0	0	71	63	0	0	53	23	0	0	0	0	0	32	3	54	299	3,538
4:55 PM	0	0	84	67	0	0	58	18	0	0	0	0	0	23	2	38	290	3,483
5:00 PM	0	0	78	75	0	0	48	31	0	0	0	0	0	26	6	46	310	3,447
5:05 PM	0	0	85	67	0	0	51	33	0	0	0	0	0	31	2	40	309	
5:10 PM	0	0	87	58	0	0	48	35	0	0	0	0	0	21	3	36	288	
5:15 PM	0	0	75	65	0	0	55	53	0	0	0	0	0	22	0	36	306	
5:20 PM	0	0	65	59	0	0	49	24	0	0	0	0	0	31	0	38	266	
5:25 PM	0	0	76	74	0	0	54	29	0	0	0	0	0	35	5	55	328	
5:30 PM	0	0	65	54	0	0	42	30	0	0	0	0	0	30	6	54	281	
5:35 PM	0	0	69	66	0	0	68	26	0	0	0	0	0	20	7	37	293	
5:40 PM	0	0	72	57	0	0	45	29	0	0	0	0	0	33	10	49	295	
5:45 PM	0	0	54	50	0	0	56	19	0	0	0	0	0	32	6	56	273	
5:50 PM	0	0	53	47	0	0	38	15	0	0	0	0	0	33	9	49	244	
5:55 PM	0	0	54	40	0	0	44	14	0	0	0	0	0	45	5	52	254	
Count Total	0	0	1,814	1,553	0	0	1,239	647	0	0	0	0	0	736	116	1,099	7,204	
Peak Hour	0	0	981	841	0	0	641	309	0	0	0	0	0	377	57	551	3,757	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

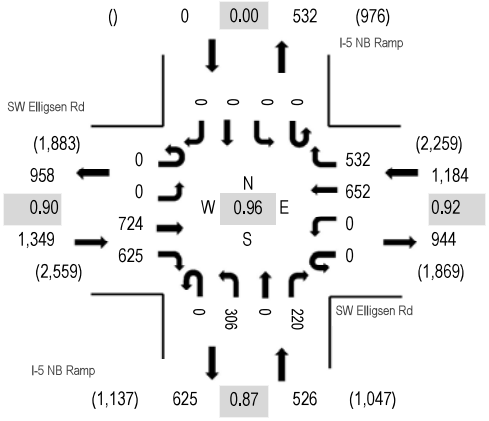
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	9	0	2	6	17	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	10	0	2	6	18	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	2	0	3	8	13	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	2	0	6	10	18	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	5	0	1	6	12	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	6	0	3	7	16	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	6	0	4	7	17	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	1	0	1	9	11	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	10	0	4	11	25	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	7	0	1	7	15	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	5	0	2	12	19	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	6	0	7	8	21	4:55 PM	0	0	1	0	1	4:55 PM	0	0	0	1	1
5:00 PM	4	0	1	7	12	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	2	0	3	3	8	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	4	0	2	7	13	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	2	6	8	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	3	0	4	10	17	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	7	0	2	4	13	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	4	0	2	5	11	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	4	0	5	5	14	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	7	0	2	2	11	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	7	0	1	6	14	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	9	0	3	7	19	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	5	0	3	7	15	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	125	0	66	166	357	Count Total	0	0	1	0	1	Count Total	0	0	0	1	1
Peak Hour	69	0	36	97	202	Peak Hour	0	0	1	0	1	Peak Hour	0	0	0	1	1

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

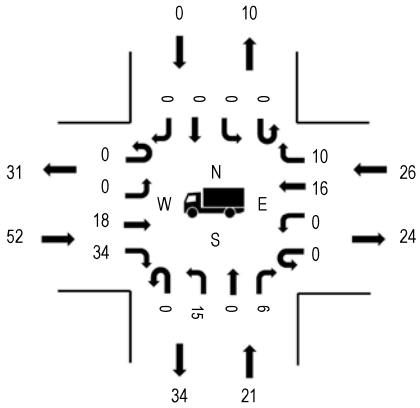
Location: 5 I-5 NB Ramp & SW Elligsen Rd PM
Date: Wednesday, September 22, 2021
Peak Hour: 04:05 PM - 05:05 PM
Peak 15-Minutes: 04:05 PM - 04:20 PM

Peak Hour

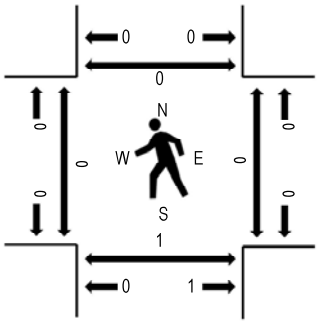
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	3.9%	0.90
WB	2.2%	0.92
NB	4.0%	0.87
SB	0.0%	0.00
All	3.2%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	SW Elligsen Rd Eastbound				SW Elligsen Rd Westbound				I-5 NB Ramp Northbound				I-5 NB Ramp Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	76	41	0	0	48	36	0	18	0	18	0	0	0	0	237	3,045
4:05 PM	0	0	76	54	0	0	51	49	0	25	0	21	0	0	0	0	276	3,059
4:10 PM	0	0	58	73	0	0	58	46	0	19	0	16	0	0	0	0	270	3,051
4:15 PM	0	0	70	43	0	0	49	47	0	23	0	16	0	0	0	0	248	3,023
4:20 PM	0	0	60	51	0	0	64	44	0	29	0	16	0	0	0	0	264	3,027
4:25 PM	0	0	53	40	0	0	62	39	0	37	0	22	0	0	0	0	253	3,006
4:30 PM	0	0	64	62	0	0	51	43	0	27	0	30	0	0	0	0	277	3,015
4:35 PM	0	0	42	65	0	0	65	46	0	23	0	17	0	0	0	0	258	2,977
4:40 PM	0	0	53	57	0	0	46	37	0	25	0	13	0	0	0	0	231	2,959
4:45 PM	0	0	59	43	0	0	48	39	0	27	0	17	0	0	0	0	233	2,971
4:50 PM	0	0	74	39	0	0	50	52	0	25	0	21	0	0	0	0	261	2,936
4:55 PM	0	0	58	52	0	0	48	38	0	28	0	13	0	0	0	0	237	2,862
5:00 PM	0	0	57	46	0	0	60	52	0	18	0	18	0	0	0	0	251	2,820
5:05 PM	0	0	58	61	0	0	66	48	0	19	0	16	0	0	0	0	268	
5:10 PM	0	0	52	49	0	0	61	42	0	21	0	17	0	0	0	0	242	
5:15 PM	0	0	51	39	0	0	72	33	0	38	0	19	0	0	0	0	252	
5:20 PM	0	0	59	41	0	0	48	42	0	25	0	28	0	0	0	0	243	
5:25 PM	0	0	66	54	0	0	64	37	0	18	0	23	0	0	0	0	262	
5:30 PM	0	0	63	40	0	0	50	49	0	23	0	14	0	0	0	0	239	
5:35 PM	0	0	48	41	0	0	53	42	0	41	0	15	0	0	0	0	240	
5:40 PM	0	0	67	42	0	0	51	37	0	23	0	23	0	0	0	0	243	
5:45 PM	0	0	47	28	0	0	51	27	0	24	0	21	0	0	0	0	198	
5:50 PM	0	0	55	40	0	0	37	22	0	16	0	17	0	0	0	0	187	
5:55 PM	0	0	56	36	0	0	30	29	0	28	0	16	0	0	0	0	195	
Count Total	0	0	1,422	1,137	0	0	1,283	976	0	600	0	447	0	0	0	0	5,865	
Peak Hour	0	0	724	625	0	0	652	532	0	306	0	220	0	0	0	0	3,059	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	7	1	2	0	10	4:00 PM	1	0	0	0	1	4:00 PM	0	0	0	0	0
4:05 PM	4	2	1	0	7	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	2	2	2	0	6	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	3	3	1	0	7	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	7	2	5	0	14	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	4	2	2	0	8	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	7	2	3	0	12	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	2	1	2	0	5	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	6	0	4	0	10	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	6	0	0	0	6	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	6	2	2	0	10	4:50 PM	0	0	0	0	0	4:50 PM	0	1	0	0	1
4:55 PM	4	5	2	0	11	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	1	0	2	0	3	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	4	3	1	0	8	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	3	0	1	0	4	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	1	4	1	0	6	5:15 PM	0	0	0	0	0	5:15 PM	0	1	0	0	1
5:20 PM	2	4	1	0	7	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	4	2	0	0	6	5:25 PM	0	0	1	0	1	5:25 PM	0	0	0	0	0
5:30 PM	7	1	2	0	10	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	5	3	3	0	11	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	4	2	1	0	7	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	3	1	1	0	5	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	4	2	2	0	8	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	3	2	5	0	10	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	99	46	46	0	191	Count Total	1	0	1	0	2	Count Total	0	2	0	0	2
Peak Hour	52	21	26	0	99	Peak Hour	0	0	0	0	0	Peak Hour	0	1	0	0	1

APPENDIX B

HCM REPORT – EXISTING CONDITIONS

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	603	0	0	541	0	0
Future Vol, veh/h	603	0	0	541	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	670	0	0	601	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	670	0	1271	670
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	601	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	930	-	187	460
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	551	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	930	-	187	460
Mov Cap-2 Maneuver	-	-	-	-	327	-
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	551	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	930	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th Signalized Intersection Summary
2: Boones Ferry Road & Day Rd

Wilsonville Delta Logistics TIA
Existing PM Peak

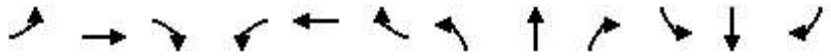
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	0	590	0	0	0	518	369	0	0	590	23
Future Volume (veh/h)	13	0	590	0	0	0	518	369	0	0	590	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1841	1900	1900	1900	1752	1841	1900	1900	1870	1811
Adj Flow Rate, veh/h	14	0	579	0	0	0	540	384	0	0	615	22
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	4	0	0	0	10	4	0	0	2	6
Cap, veh/h	137	0	921	0	90	0	1757	1613	0	2	1033	37
Arrive On Green	0.05	0.00	0.05	0.00	0.00	0.00	0.91	1.00	0.00	0.00	0.30	0.30
Sat Flow, veh/h	1440	0	1560	0	1900	0	3237	1841	0	1810	3497	125
Grp Volume(v), veh/h	14	0	579	0	0	0	540	384	0	0	312	325
Grp Sat Flow(s),veh/h/ln	1440	0	1560	0	1900	0	1618	1841	0	1810	1777	1845
Q Serve(g_s), s	1.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	15.8	15.8
Cycle Q Clear(g_c), s	1.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	15.8	15.8
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		0.07
Lane Grp Cap(c), veh/h	137	0	921	0	90	0	1757	1613	0	2	525	545
V/C Ratio(X)	0.10	0.00	0.63	0.00	0.00	0.00	0.31	0.24	0.00	0.00	0.60	0.60
Avail Cap(c_a), veh/h	288	0	1085	0	290	0	1757	1613	0	69	525	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.96	0.96	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	0.0	14.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	31.6	31.6
Incr Delay (d2), s/veh	0.3	0.0	0.9	0.0	0.0	0.0	0.1	0.3	0.0	0.0	4.9	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	8.6	0.0	0.0	0.0	0.6	0.1	0.0	0.0	7.3	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.4	0.0	14.9	0.0	0.0	0.0	2.4	0.3	0.0	0.0	36.5	36.4
LnGrp LOS	D	A	B	A	A	A	A	A	A	A	D	D
Approach Vol, veh/h		593			0			924			637	
Approach Delay, s/veh		15.7			0.0			1.6			36.5	
Approach LOS		B						A			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	96.0		9.0	61.0	35.0		9.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	73.0		16.0	46.0	31.0		16.0				
Max Q Clear Time (g_c+I1), s	0.0	2.0		3.0	4.3	17.8		0.0				
Green Ext Time (p_c), s	0.0	2.5		2.0	2.1	3.1		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.8	
HCM 6th LOS		B	

HCM 6th Signalized Intersection Summary
3: Boones Ferry Road & 95th Avenue

Wilsonville Delta Logistics TIA
Existing PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	3	760	28	15	6	446	743	8	1	1032	164
Future Volume (veh/h)	146	3	760	28	15	6	446	743	8	1	1032	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.96	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1900	1841	1900	1900	1900	1693	1781	1900	1900	1856	1781
Adj Flow Rate, veh/h	152	3	760	29	16	1	465	774	7	1	1075	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	7	0	4	0	0	0	14	8	0	0	3	8
Cap, veh/h	301	5	1210	116	311	19	850	2029	18	164	1444	
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.54	1.00	1.00	0.09	0.41	0.00
Sat Flow, veh/h	1324	26	2637	714	1765	110	3127	3436	31	1810	3526	1510
Grp Volume(v), veh/h	155	0	760	29	0	17	465	381	400	1	1075	0
Grp Sat Flow(s),veh/h/ln	1350	0	1319	714	0	1875	1564	1692	1775	1810	1763	1510
Q Serve(g_s), s	10.8	0.0	0.0	4.2	0.0	0.8	10.1	0.0	0.0	0.1	27.2	0.0
Cycle Q Clear(g_c), s	11.6	0.0	0.0	15.7	0.0	0.8	10.1	0.0	0.0	0.1	27.2	0.0
Prop In Lane	0.98		1.00	1.00		0.06	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	305	0	1210	116	0	330	850	999	1048	164	1444	
V/C Ratio(X)	0.51	0.00	0.63	0.25	0.00	0.05	0.55	0.38	0.38	0.01	0.74	
Avail Cap(c_a), veh/h	380	0	1349	153	0	429	850	999	1048	164	1444	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.73	0.73	0.73	0.77	0.77	0.00
Uniform Delay (d), s/veh	40.8	0.0	22.2	47.8	0.0	36.0	19.8	0.0	0.0	43.4	26.3	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.7	0.8	0.0	0.0	0.5	0.8	0.8	0.0	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	6.8	0.8	0.0	0.4	3.0	0.2	0.2	0.0	11.4	0.0
Unsig. Movement Delay, s/veh												15.50
LnGrp Delay(d),s/veh	41.8	0.0	22.8	48.6	0.0	36.0	20.3	0.8	0.8	43.4	29.1	15.5
LnGrp LOS	D	A	C	D	A	D	C	A	A	D	C	B
Approach Vol, veh/h		915			46			1246			1173	A
Approach Delay, s/veh		26.0			43.9			8.1			28.0	
Approach LOS		C			D			A			C	

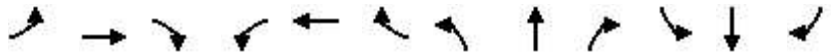
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.5	48.0		23.5	14.5	67.0		23.5
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	23.0	43.0		24.0	4.0	62.0		24.0
Max Q Clear Time (g_c+I1), s	12.1	29.2		17.7	2.1	2.0		13.6
Green Ext Time (p_c), s	1.7	4.7		0.1	0.0	8.9		3.0

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary — Wilsonville Delta Logistics TIA
4: I-5 SB On Ramp/I-5 SB Off Ramp & Boones Ferry Road/Elligsen Rd — Existing PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	↰	↱
Traffic Volume (veh/h)	0	981	839	0	639	312	0	0	0	373	52	558
Future Volume (veh/h)	0	981	839	0	639	312	0	0	0	373	52	558
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1841	0	1826	1870				1841	1856	1663
Adj Flow Rate, veh/h	0	1044	0	0	680	0				436	0	538
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	5	4	0	5	2				4	3	16
Cap, veh/h	0	1697		0	1697					1457	0	577
Arrive On Green	0.00	0.98	0.00	0.00	0.98	0.00				0.42	0.00	0.42
Sat Flow, veh/h	0	3561	1560	0	3561	1585				3506	0	1389
Grp Volume(v), veh/h	0	1044	0	0	680	0				436	0	538
Grp Sat Flow(s),veh/h/ln	0	1735	1560	0	1735	1585				1753	0	1389
Q Serve(g_s), s	0.0	1.7	0.0	0.0	0.7	0.0				8.7	0.0	38.8
Cycle Q Clear(g_c), s	0.0	1.7	0.0	0.0	0.7	0.0				8.7	0.0	38.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1697		0	1697					1457	0	577
V/C Ratio(X)	0.00	0.62		0.00	0.40					0.30	0.00	0.93
Avail Cap(c_a), veh/h	0	1697		0	1697					1803	0	714
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.68	0.00	0.00	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.6	0.0	0.0	0.6	0.0				20.5	0.0	29.3
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	0.7	0.0				0.1	0.0	16.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.0	0.0	0.3	0.0				3.4	0.0	14.4
Unsig. Movement Delay, s/veh			1.20			0.30						
LnGrp Delay(d),s/veh	0.0	1.7	1.2	0.0	1.2	0.3				20.5	0.0	45.3
LnGrp LOS	A	A	A	A	A	A				C	A	D
Approach Vol, veh/h		1937	A		1012	A					974	
Approach Delay, s/veh		1.5			0.9						34.2	
Approach LOS		A			A						C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	56.4	48.6	56.4
Change Period (Y+Rc), s	5.0	5.0	5.0
Max Green Setting (Gmax), s	41.0	54.0	41.0
Max Q Clear Time (g_c+I1), s	3.7	40.8	2.7
Green Ext Time (p_c), s	9.9	2.9	5.6

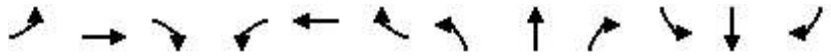
Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.
Unsignalized Delay for [EBR, WBR] is included in calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
5: I-5 NB Off-Ramp/I-5 NB On-Ramp & Elligsen Rd

Wilsonville Delta Logistics TIA
Existing PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱	↰↰		↱			
Traffic Volume (veh/h)	0	707	647	0	650	508	301	0	230	0	0	0
Future Volume (veh/h)	0	707	647	0	650	508	301	0	230	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1856	1811	0	1870	1870	1811	0	1841			
Adj Flow Rate, veh/h	0	752	0	0	691	0	320	0	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	3	6	0	2	2	6	0	4			
Cap, veh/h	0	2780		0	2802		405	0				
Arrive On Green	0.00	1.00	0.00	0.00	0.79	0.00	0.12	0.00	0.00			
Sat Flow, veh/h	0	3618	1535	0	3647	1585	3346	0	1560			
Grp Volume(v), veh/h	0	752	0	0	691	0	320	0	0			
Grp Sat Flow(s),veh/h/ln	0	1763	1535	0	1777	1585	1673	0	1560			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	5.4	0.0	9.8	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	5.4	0.0	9.8	0.0	0.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2780		0	2802		405	0				
V/C Ratio(X)	0.00	0.27		0.00	0.25		0.79	0.00				
Avail Cap(c_a), veh/h	0	2780		0	2802		1291	0				
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.67	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	2.9	0.0	44.8	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.2	0.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	1.4	0.0	4.0	0.0	0.0			
Unsig. Movement Delay, s/veh			0.80			0.60			42.30			
LnGrp Delay(d),s/veh	0.0	0.2	0.8	0.0	3.1	0.6	47.0	0.0	42.3			
LnGrp LOS	A	A	A	A	A	A	D	A	D			
Approach Vol, veh/h		1440	A		1231	A		416	A			
Approach Delay, s/veh		0.5			2.0			45.9				
Approach LOS		A			A			D				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		87.8				87.8		17.2				
Change Period (Y+Rc), s		5.0				5.0		4.5				
Max Green Setting (Gmax), s		55.0				55.0		40.5				
Max Q Clear Time (g_c+I1), s		2.0				7.4		11.8				
Green Ext Time (p_c), s		6.6				5.8		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			7.2									
HCM 6th LOS			A									

Notes

Unsignalized Delay for [NBR, EBR, WBR] is included in calculations of the approach delay and intersection delay.

ID	Software/Method	Intersection	Control Type	LOS	Delay	V/C Ratio
2	Synchro HCM 6th Signal	Boones Ferry Road & Day Rd	Signal	B	16	0.65
3	Synchro HCM 6th Signal	Boones Ferry Road & 95th Avenue	Signal	C	20	0.69
4	Synchro HCM 6th Signal	I-5 SB On Ramp/I-5 SB Off Ramp & Boon	Signal	A	10	0.75
5	Synchro HCM 6th Signal	I-5 NB Off-Ramp/I-5 NB On-Ramp & Ellig	Signal	A	7	0.33

APPENDIX C

STAGE II LIST

Updated by D. Pauly 09.21.2021

Stage II Approved

Project	Land Use	Status	Size	Total PM Peak Trips	Trip Allocation Percentage		Net New (Primary + Diverted) PM Peak Hour Trips not yet active		
					Internal	Pass-By	In	Out	Total
Hydro-Temp: Recent agreement with the City, the project is vested and so are the traffic trips	Office/Flex-Space	Not built	60.8 KSF				44	46	90
Mercedes Benz (Phase 2)	Auto Dealership	Not built					20	26	46
Shredding Systems (SQFT does not including paint canopy and another canopy)	Industrial/Commercial	Under construction	66.8 KSF				20	46	66
Town Center Ph III *and trip dedication to Miller Paint store Uses marked with "*" have not been built and PM peak hr trip sum exceeds remaining vested trip level by 2 trips. It has yet to be determined how to allocate trips between remaining buildings.*	*High Turnover Restaurant (Pad 1)	Not built	7.5 KSF				24	17	47*
	Remaining Approved Total								47
Wilsonville Road Business Park Phase II	Phase 2 - office (2-story building on west parcel)	Partially Built	21.7 KSF				15	71	86
Frog Pond-Stafford Meadows (Phase 2 and 3a of 10/18 study)	Residential	Partially Built, 24 homes built and occupied	46 units				12	10	22
Frog Pond-Frog Pond Meadows (Phase 3B, 4A, 4B of 10/18 Study)	Residential	Partially Built, 3 homes built and occupied	74 units				44	27	71
Frog Pond Ridge	Residential	ruction, no homes buil	71 units				43	28	71
Frog Pond-Morgan Farm	Residential	Partially Built, 38 homes built and occupied	80 units				28	14	42
Fir Avenue Commons	Residential	Partially Built, 2 homes built and occupied	10 units				6	2	8
Magnolia Townhomes	Residential	Under construction	6 units				3	2	5
Aspen Meadows II	Residential	Under construction, no homes sold and occupied	5 units				2	3	5
Canyon Creek III	Residential	Approved	5 units (traffic study was for 11)				2	3	5
Coffee Creek Logistics	Industrial/Commercial	Under construction	115K				16	41	57

Stage II Approved – Villebois

Project	Phase	Status	Land Use					Total PM Peak Trips	Trip Allocation Percentage		Net New (Primary + Diverted) PM Peak Hour Trips not yet active		
			SF	Town.	Apt.	Retail	School		Internal	Pass-By	In	Out	Total
North (Entirety)	Residential	Partially built, 364 homes sold and occupied	466								65	37	102
Central	Residential	Partially Built, 735 homes (102 single family, 319 condo/row homes, 365 apartments) occupied	102	391	365	8.5 KSF					30	13	43
FOR REFERENCE SAP EAST			537	42									
FOR REFERENCE SAP SOUTH (Includes PDP 7 Grande Poin			560										

Pending Projects for Which Traffic Analysis has been completed (except Villebois)

Project	Land Use	Status	Size	Total PM Peak T	Trip Allocation Percentage			Net New (Primary) PM Peak Hour Trips		
					Internal	Pass-By	Diverted	In	Out	Total
PW Complex on Boberg	Public	under review	15,800 office, 17,900 warehouse					11	39	50
DAS North Valley Complex	Public/Industria	under review	174,700 sf					5	15	20
Frog Pond Crossing								19	9	28
Boones Ferry Gas Station/Conve	Commercail	under review	3,460 sf store, 12 g	240		134		53	53	106

APPENDIX D

HCM REPORT – EXISTNG + PROJECT

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	603	3	5	541	7	13
Future Vol, veh/h	603	3	5	541	7	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	670	3	6	601	8	14

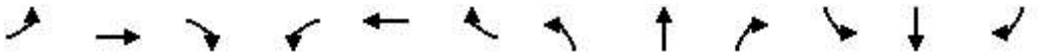
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	673	0	1285	672
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	613	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	927	-	183	459
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	544	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	927	-	182	459
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	541	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	400	-	-	927	-
HCM Lane V/C Ratio	0.056	-	-	0.006	-
HCM Control Delay (s)	14.5	-	-	8.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

HCM 6th Signalized Intersection Summary
2: Boones Ferry Road & Day Rd

Wilsonville Delta Logistics TIA
Existing PM + Project



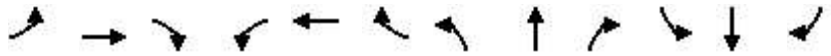
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	0	601	0	0	0	522	369	0	0	590	24
Future Volume (veh/h)	15	0	601	0	0	0	522	369	0	0	590	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1841	1900	1900	1900	1752	1841	1900	1900	1870	1811
Adj Flow Rate, veh/h	16	0	590	0	0	0	544	384	0	0	615	23
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	4	0	0	0	10	4	0	0	2	6
Cap, veh/h	140	0	936	0	94	0	1782	1610	0	2	997	37
Arrive On Green	0.05	0.00	0.05	0.00	0.00	0.00	0.92	1.00	0.00	0.00	0.29	0.29
Sat Flow, veh/h	1440	0	1560	0	1900	0	3237	1841	0	1810	3491	130
Grp Volume(v), veh/h	16	0	590	0	0	0	544	384	0	0	313	325
Grp Sat Flow(s),veh/h/ln	1440	0	1560	0	1900	0	1618	1841	0	1810	1777	1844
Q Serve(g_s), s	1.1	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	16.0	16.1
Cycle Q Clear(g_c), s	1.1	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	16.0	16.1
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		0.07
Lane Grp Cap(c), veh/h	140	0	936	0	94	0	1782	1610	0	2	508	527
V/C Ratio(X)	0.11	0.00	0.63	0.00	0.00	0.00	0.31	0.24	0.00	0.00	0.62	0.62
Avail Cap(c_a), veh/h	288	0	1097	0	290	0	1782	1610	0	69	508	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.95	0.95	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	0.0	13.5	0.0	0.0	0.0	2.0	0.0	0.0	0.0	32.5	32.5
Incr Delay (d2), s/veh	0.4	0.0	0.9	0.0	0.0	0.0	0.1	0.3	0.0	0.0	5.5	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	8.6	0.0	0.0	0.0	0.5	0.1	0.0	0.0	7.5	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	0.0	14.4	0.0	0.0	0.0	2.1	0.3	0.0	0.0	38.0	37.9
LnGrp LOS	D	A	B	A	A	A	A	A	A	A	D	D
Approach Vol, veh/h		606			0			928			638	
Approach Delay, s/veh		15.3			0.0			1.4			37.9	
Approach LOS		B						A			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	95.8		9.2	61.8	34.0		9.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	73.0		16.0	47.0	30.0		16.0				
Max Q Clear Time (g_c+I1), s	0.0	2.0		3.1	4.0	18.1		0.0				
Green Ext Time (p_c), s	0.0	2.5		2.1	2.1	3.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			16.0									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
3: Boones Ferry Road & 95th Avenue

Wilsonville Delta Logistics TIA
Existing PM + Project



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	3	760	28	15	6	446	747	8	1	1043	164
Future Volume (veh/h)	146	3	760	28	15	6	446	747	8	1	1043	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.96	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1900	1841	1900	1900	1900	1693	1781	1900	1900	1856	1781
Adj Flow Rate, veh/h	152	3	761	29	16	1	465	778	7	1	1086	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	7	0	4	0	0	0	14	8	0	0	3	8
Cap, veh/h	301	5	1210	116	311	19	849	2029	18	164	1444	
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.54	1.00	1.00	0.09	0.41	0.00
Sat Flow, veh/h	1324	26	2637	713	1765	110	3127	3436	31	1810	3526	1510
Grp Volume(v), veh/h	155	0	761	29	0	17	465	383	402	1	1086	0
Grp Sat Flow(s),veh/h/ln	1350	0	1319	713	0	1875	1564	1692	1775	1810	1763	1510
Q Serve(g_s), s	10.8	0.0	0.0	4.2	0.0	0.8	10.1	0.0	0.0	0.1	27.6	0.0
Cycle Q Clear(g_c), s	11.6	0.0	0.0	15.7	0.0	0.8	10.1	0.0	0.0	0.1	27.6	0.0
Prop In Lane	0.98		1.00	1.00		0.06	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	305	0	1210	116	0	330	849	999	1048	164	1444	
V/C Ratio(X)	0.51	0.00	0.63	0.25	0.00	0.05	0.55	0.38	0.38	0.01	0.75	
Avail Cap(c_a), veh/h	380	0	1349	153	0	429	849	999	1048	164	1444	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.73	0.73	0.73	0.77	0.77	0.00
Uniform Delay (d), s/veh	40.8	0.0	22.2	47.8	0.0	36.0	19.8	0.0	0.0	43.4	26.5	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.7	0.8	0.0	0.0	0.5	0.8	0.8	0.0	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	6.8	0.8	0.0	0.4	3.0	0.2	0.2	0.0	11.6	0.0
Unsig. Movement Delay, s/veh												15.50
LnGrp Delay(d),s/veh	41.8	0.0	22.8	48.6	0.0	36.0	20.3	0.8	0.8	43.4	29.3	15.5
LnGrp LOS	D	A	C	D	A	D	C	A	A	D	C	B
Approach Vol, veh/h		916			46			1250			1184	A
Approach Delay, s/veh		26.0			43.9			8.1			28.2	
Approach LOS		C			D			A			C	

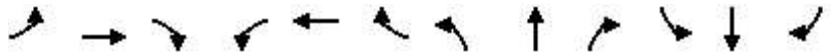
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.5	48.0		23.5	14.5	67.0		23.5
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	23.0	43.0		24.0	4.0	62.0		24.0
Max Q Clear Time (g_c+I1), s	12.1	29.6		17.7	2.1	2.0		13.6
Green Ext Time (p_c), s	1.7	4.7		0.1	0.0	9.0		3.0

Intersection Summary		
HCM 6th Ctrl Delay		20.4
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary — Wilsonville Delta Logistics TIA
4: I-5 SB On Ramp/I-5 SB Off Ramp & Boones Ferry Road/Elligsen Rd — Existing PM + Project



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	↰	↱
Traffic Volume (veh/h)	0	989	842	0	640	312	0	0	0	373	52	561
Future Volume (veh/h)	0	989	842	0	640	312	0	0	0	373	52	561
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1841	0	1826	1870				1841	1856	1663
Adj Flow Rate, veh/h	0	1052	0	0	681	0				436	0	542
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	5	4	0	5	2				4	3	16
Cap, veh/h	0	1688		0	1688					1467	0	581
Arrive On Green	0.00	0.97	0.00	0.00	0.97	0.00				0.42	0.00	0.42
Sat Flow, veh/h	0	3561	1560	0	3561	1585				3506	0	1389
Grp Volume(v), veh/h	0	1052	0	0	681	0				436	0	542
Grp Sat Flow(s),veh/h/ln	0	1735	1560	0	1735	1585				1753	0	1389
Q Serve(g_s), s	0.0	2.2	0.0	0.0	0.9	0.0				8.7	0.0	39.1
Cycle Q Clear(g_c), s	0.0	2.2	0.0	0.0	0.9	0.0				8.7	0.0	39.1
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1688		0	1688					1467	0	581
V/C Ratio(X)	0.00	0.62		0.00	0.40					0.30	0.00	0.93
Avail Cap(c_a), veh/h	0	1688		0	1688					1803	0	715
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.67	0.00	0.00	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.8	0.0	0.0	0.7	0.0				20.3	0.0	29.1
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.0	0.7	0.0				0.1	0.0	16.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.0	0.0	0.4	0.0				3.3	0.0	14.5
Unsig. Movement Delay, s/veh			1.20			0.30						
LnGrp Delay(d),s/veh	0.0	1.9	1.2	0.0	1.4	0.3				20.4	0.0	45.4
LnGrp LOS	A	A	A	A	A	A				C	A	D
Approach Vol, veh/h		1948	A		1013	A					978	
Approach Delay, s/veh		1.6			1.0						34.2	
Approach LOS		A			A						C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	56.1	48.9	56.1
Change Period (Y+Rc), s	5.0	5.0	5.0
Max Green Setting (Gmax), s	41.0	54.0	41.0
Max Q Clear Time (g_c+I1), s	4.2	41.1	2.9
Green Ext Time (p_c), s	9.9	2.8	5.6

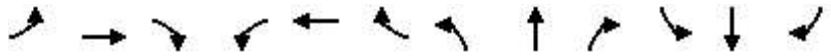
Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.
Unsignalized Delay for [EBR, WBR] is included in calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
5: I-5 NB Off-Ramp/I-5 NB On-Ramp & Elligsen Rd

Wilsonville Delta Logistics TIA
Existing PM + Project



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱	↰↰		↱			
Traffic Volume (veh/h)	0	708	654	0	650	508	302	0	230	0	0	0
Future Volume (veh/h)	0	708	654	0	650	508	302	0	230	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1856	1811	0	1870	1870	1811	0	1841			
Adj Flow Rate, veh/h	0	753	0	0	691	0	321	0	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	3	6	0	2	2	6	0	4			
Cap, veh/h	0	2779		0	2801		406	0				
Arrive On Green	0.00	1.00	0.00	0.00	0.79	0.00	0.12	0.00	0.00			
Sat Flow, veh/h	0	3618	1535	0	3647	1585	3346	0	1560			
Grp Volume(v), veh/h	0	753	0	0	691	0	321	0	0			
Grp Sat Flow(s),veh/h/ln	0	1763	1535	0	1777	1585	1673	0	1560			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	5.4	0.0	9.8	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	5.4	0.0	9.8	0.0	0.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2779		0	2801		406	0				
V/C Ratio(X)	0.00	0.27		0.00	0.25		0.79	0.00				
Avail Cap(c_a), veh/h	0	2779		0	2801		1291	0				
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.66	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	2.9	0.0	44.8	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.2	0.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	1.4	0.0	4.0	0.0	0.0			
Unsig. Movement Delay, s/veh			0.80			0.60			42.30			
LnGrp Delay(d),s/veh	0.0	0.2	0.8	0.0	3.1	0.6	47.0	0.0	42.3			
LnGrp LOS	A	A	A	A	A	A	D	A	D			
Approach Vol, veh/h		1449	A		1231	A		418	A			
Approach Delay, s/veh		0.5			2.0			45.9				
Approach LOS		A			A			D				

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	87.8		87.8		17.2	
Change Period (Y+Rc), s	5.0		5.0		4.5	
Max Green Setting (Gmax), s	55.0		55.0		40.5	
Max Q Clear Time (g_c+I1), s	2.0		7.4		11.8	
Green Ext Time (p_c), s	6.6		5.8		1.0	

Intersection Summary		
HCM 6th Ctrl Delay	7.2	
HCM 6th LOS	A	

Notes

Unsignalized Delay for [NBR, EBR, WBR] is included in calculations of the approach delay and intersection delay.

ID	Software/Method	Intersection	Control Type	LOS	Delay	V/C Ratio
2	Synchro HCM 6th Signal	Boones Ferry Road & Day Rd	Signal	B	16	0.66
3	Synchro HCM 6th Signal	Boones Ferry Road & 95th Avenue	Signal	C	20	0.7
4	Synchro HCM 6th Signal	I-5 SB On Ramp/I-5 SB Off Ramp & Boon	Signal	A	10	0.76
5	Synchro HCM 6th Signal	I-5 NB Off-Ramp/I-5 NB On-Ramp & Ellig	Signal	A	7	0.33

APPENDIX E

HCM REPORT – EXISTNG + STAGE II

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	603	0	0	541	0	0
Future Vol, veh/h	603	0	0	541	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	670	0	0	601	0	0

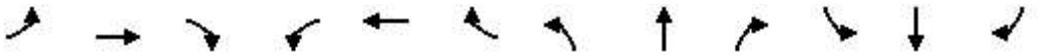
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	670	0	1271	670
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	601	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	930	-	187	460
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	551	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	930	-	187	460
Mov Cap-2 Maneuver	-	-	-	-	327	-
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	551	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	930	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th Signalized Intersection Summary
2: Boones Ferry Road & Day Rd

Wilsonville Delta Logistics TIA
Existing PM + Stage II



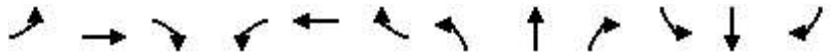
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	0	590	0	0	0	518	375	0	0	593	23
Future Volume (veh/h)	13	0	590	0	0	0	518	375	0	0	593	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1841	1900	1900	1900	1752	1841	1900	1900	1870	1811
Adj Flow Rate, veh/h	14	0	579	0	0	0	540	391	0	0	618	22
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	4	0	0	0	10	4	0	0	2	6
Cap, veh/h	137	0	921	0	90	0	1757	1613	0	2	1033	37
Arrive On Green	0.05	0.00	0.05	0.00	0.00	0.00	0.91	1.00	0.00	0.00	0.30	0.30
Sat Flow, veh/h	1440	0	1560	0	1900	0	3237	1841	0	1810	3498	124
Grp Volume(v), veh/h	14	0	579	0	0	0	540	391	0	0	314	326
Grp Sat Flow(s),veh/h/ln	1440	0	1560	0	1900	0	1618	1841	0	1810	1777	1846
Q Serve(g_s), s	1.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	15.9	15.9
Cycle Q Clear(g_c), s	1.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	15.9	15.9
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		0.07
Lane Grp Cap(c), veh/h	137	0	921	0	90	0	1757	1613	0	2	525	545
V/C Ratio(X)	0.10	0.00	0.63	0.00	0.00	0.00	0.31	0.24	0.00	0.00	0.60	0.60
Avail Cap(c_a), veh/h	288	0	1085	0	290	0	1757	1613	0	69	525	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.95	0.95	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	0.0	14.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	31.7	31.7
Incr Delay (d2), s/veh	0.3	0.0	0.9	0.0	0.0	0.0	0.1	0.3	0.0	0.0	5.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	8.6	0.0	0.0	0.0	0.6	0.2	0.0	0.0	7.4	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.4	0.0	14.9	0.0	0.0	0.0	2.4	0.3	0.0	0.0	36.6	36.5
LnGrp LOS	D	A	B	A	A	A	A	A	A	A	D	D
Approach Vol, veh/h		593			0			931			640	
Approach Delay, s/veh		15.7			0.0			1.6			36.6	
Approach LOS		B						A			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	96.0		9.0	61.0	35.0		9.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	73.0		16.0	46.0	31.0		16.0				
Max Q Clear Time (g_c+I1), s	0.0	2.0		3.0	4.3	17.9		0.0				
Green Ext Time (p_c), s	0.0	2.6		2.0	2.1	3.1		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.8	
HCM 6th LOS		B	

HCM 6th Signalized Intersection Summary
3: Boones Ferry Road & 95th Avenue

Wilsonville Delta Logistics TIA
Existing PM + Stage II



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	3	796	28	15	6	475	745	8	1	1033	166
Future Volume (veh/h)	150	3	796	28	15	6	475	745	8	1	1033	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.97	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1900	1841	1900	1900	1900	1693	1781	1900	1900	1856	1781
Adj Flow Rate, veh/h	156	3	800	29	16	1	495	776	7	1	1076	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	7	0	4	0	0	0	14	8	0	0	3	8
Cap, veh/h	306	5	1236	115	317	20	868	2029	18	158	1410	
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.56	1.00	1.00	0.09	0.40	0.00
Sat Flow, veh/h	1326	25	2638	687	1765	110	3127	3436	31	1810	3526	1510
Grp Volume(v), veh/h	159	0	800	29	0	17	495	382	401	1	1076	0
Grp Sat Flow(s),veh/h/ln	1351	0	1319	687	0	1875	1564	1692	1775	1810	1763	1510
Q Serve(g_s), s	11.1	0.0	0.0	4.3	0.0	0.8	10.8	0.0	0.0	0.1	27.7	0.0
Cycle Q Clear(g_c), s	11.8	0.0	0.0	16.1	0.0	0.8	10.8	0.0	0.0	0.1	27.7	0.0
Prop In Lane	0.98		1.00	1.00		0.06	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	310	0	1236	115	0	337	868	999	1048	158	1410	
V/C Ratio(X)	0.51	0.00	0.65	0.25	0.00	0.05	0.57	0.38	0.38	0.01	0.76	
Avail Cap(c_a), veh/h	380	0	1365	148	0	429	868	999	1048	158	1410	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.70	0.70	0.70	0.77	0.77	0.00
Uniform Delay (d), s/veh	40.6	0.0	21.8	47.7	0.0	35.7	19.3	0.0	0.0	43.8	27.2	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.8	0.9	0.0	0.0	0.6	0.8	0.7	0.0	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	7.2	0.8	0.0	0.4	3.1	0.2	0.2	0.0	11.7	0.0
Unsig. Movement Delay, s/veh												15.50
LnGrp Delay(d),s/veh	41.5	0.0	22.6	48.6	0.0	35.7	19.9	0.8	0.7	43.8	30.3	15.5
LnGrp LOS	D	A	C	D	A	D	B	A	A	D	C	B
Approach Vol, veh/h		959			46			1278			1175	A
Approach Delay, s/veh		25.8			43.8			8.2			29.1	
Approach LOS		C			D			A			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.2	47.0		23.8	14.2	67.0		23.8
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	24.0	42.0		24.0	4.0	62.0		24.0
Max Q Clear Time (g_c+I1), s	12.8	29.7		18.1	2.1	2.0		13.8
Green Ext Time (p_c), s	1.8	4.4		0.1	0.0	9.0		3.1

Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary — Wilsonville Delta Logistics TIA
4: I-5 SB On Ramp/I-5 SB Off Ramp & Boones Ferry Road/Elligsen Rd — Existing PM + Stage II

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	↰	↱
Traffic Volume (veh/h)	0	1016	841	0	644	317	0	0	0	416	52	584
Future Volume (veh/h)	0	1016	841	0	644	317	0	0	0	416	52	584
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1841	0	1826	1870				1841	1856	1663
Adj Flow Rate, veh/h	0	1081	0	0	685	0				482	0	566
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	5	4	0	5	2				4	3	16
Cap, veh/h	0	1629		0	1629					1525	0	605
Arrive On Green	0.00	0.94	0.00	0.00	0.94	0.00				0.44	0.00	0.44
Sat Flow, veh/h	0	3561	1560	0	3561	1585				3506	0	1389
Grp Volume(v), veh/h	0	1081	0	0	685	0				482	0	566
Grp Sat Flow(s),veh/h/ln	0	1735	1560	0	1735	1585				1753	0	1389
Q Serve(g_s), s	0.0	5.3	0.0	0.0	2.1	0.0				9.5	0.0	40.8
Cycle Q Clear(g_c), s	0.0	5.3	0.0	0.0	2.1	0.0				9.5	0.0	40.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1629		0	1629					1525	0	605
V/C Ratio(X)	0.00	0.66		0.00	0.42					0.32	0.00	0.94
Avail Cap(c_a), veh/h	0	1629		0	1629					1803	0	715
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.66	0.00	0.00	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	1.8	0.0	0.0	1.8	0.0				19.4	0.0	28.3
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	0.7	0.0				0.1	0.0	17.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	0.0	0.0	0.7	0.0				3.6	0.0	15.3
Unsig. Movement Delay, s/veh			1.20			0.30						
LnGrp Delay(d),s/veh	0.0	3.3	1.2	0.0	2.5	0.3				19.5	0.0	45.7
LnGrp LOS	A	A	A	A	A	A				B	A	D
Approach Vol, veh/h		1976	A		1022	A					1048	
Approach Delay, s/veh		2.3			1.8						33.6	
Approach LOS		A			A						C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	54.3	50.7	54.3
Change Period (Y+Rc), s	5.0	5.0	5.0
Max Green Setting (Gmax), s	41.0	54.0	41.0
Max Q Clear Time (g_c+I1), s	7.3	42.8	4.1
Green Ext Time (p_c), s	10.1	2.9	5.6

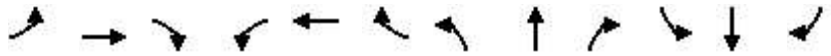
Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.
Unsignalized Delay for [EBR, WBR] is included in calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
5: I-5 NB Off-Ramp/I-5 NB On-Ramp & Elligsen Rd

Wilsonville Delta Logistics TIA
Existing PM + Stage II



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	755	677	0	659	508	302	0	234	0	0	0
Future Volume (veh/h)	0	755	677	0	659	508	302	0	234	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1856	1811	0	1870	1870	1811	0	1841			
Adj Flow Rate, veh/h	0	803	0	0	701	0	321	0	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	3	6	0	2	2	6	0	4			
Cap, veh/h	0	2779		0	2801		406	0				
Arrive On Green	0.00	1.00	0.00	0.00	0.79	0.00	0.12	0.00	0.00			
Sat Flow, veh/h	0	3618	1535	0	3647	1585	3346	0	1560			
Grp Volume(v), veh/h	0	803	0	0	701	0	321	0	0			
Grp Sat Flow(s),veh/h/ln	0	1763	1535	0	1777	1585	1673	0	1560			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	5.5	0.0	9.8	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	5.5	0.0	9.8	0.0	0.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2779		0	2801		406	0				
V/C Ratio(X)	0.00	0.29		0.00	0.25		0.79	0.00				
Avail Cap(c_a), veh/h	0	2779		0	2801		1259	0				
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.64	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	2.9	0.0	44.8	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.2	0.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	1.4	0.0	4.0	0.0	0.0			
Unsig. Movement Delay, s/veh			0.80			0.60			42.30			
LnGrp Delay(d),s/veh	0.0	0.2	0.8	0.0	3.1	0.6	47.0	0.0	42.3			
LnGrp LOS	A	A	A	A	A	A	D	A	D			
Approach Vol, veh/h		1523	A		1241	A		435	A			
Approach Delay, s/veh		0.5			2.0			45.8				
Approach LOS		A			A			D				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		87.8				87.8		17.2				
Change Period (Y+Rc), s		5.0				5.0		4.5				
Max Green Setting (Gmax), s		56.0				56.0		39.5				
Max Q Clear Time (g_c+I1), s		2.0				7.5		11.8				
Green Ext Time (p_c), s		7.2				5.9		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			7.2									
HCM 6th LOS			A									

Notes

Unsignalized Delay for [NBR, EBR, WBR] is included in calculations of the approach delay and intersection delay.

ID	Software/Method	Intersection	Control Type	LOS	Delay	V/C Ratio
2	Synchro HCM 6th Signal	Boones Ferry Road & Day Rd	Signal	B	16	0.66
3	Synchro HCM 6th Signal	Boones Ferry Road & 95th Avenue	Signal	C	21	0.71
4	Synchro HCM 6th Signal	I-5 SB On Ramp/I-5 SB Off Ramp & Boon	Signal	B	10	0.79
5	Synchro HCM 6th Signal	I-5 NB Off-Ramp/I-5 NB On-Ramp & Ellig	Signal	A	7	0.35

APPENDIX F

HCM REPORT – EXISTNG + PROJECT + STAGE II

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	603	3	5	541	7	13
Future Vol, veh/h	603	3	5	541	7	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	670	3	6	601	8	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	673	0	1285	672
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	613	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	927	-	183	459
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	544	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	927	-	182	459
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	541	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	400	-	-	927	-
HCM Lane V/C Ratio	0.056	-	-	0.006	-
HCM Control Delay (s)	14.5	-	-	8.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

HCM 6th Signalized Intersection Summary
2: Boones Ferry Road & Day Rd

Wilsonville Delta Logistics TIA
Existing PM + Stage II + Project

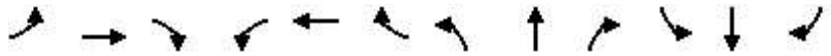
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	0	601	0	0	0	522	375	0	0	593	24
Future Volume (veh/h)	15	0	601	0	0	0	522	375	0	0	593	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1841	1900	1900	1900	1752	1841	1900	1900	1870	1811
Adj Flow Rate, veh/h	16	0	590	0	0	0	544	391	0	0	618	23
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	4	0	0	0	10	4	0	0	2	6
Cap, veh/h	140	0	936	0	94	0	1782	1610	0	2	998	37
Arrive On Green	0.05	0.00	0.05	0.00	0.00	0.00	0.92	1.00	0.00	0.00	0.29	0.29
Sat Flow, veh/h	1440	0	1560	0	1900	0	3237	1841	0	1810	3491	130
Grp Volume(v), veh/h	16	0	590	0	0	0	544	391	0	0	314	327
Grp Sat Flow(s),veh/h/ln	1440	0	1560	0	1900	0	1618	1841	0	1810	1777	1844
Q Serve(g_s), s	1.1	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	16.1	16.1
Cycle Q Clear(g_c), s	1.1	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	16.1	16.1
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		0.07
Lane Grp Cap(c), veh/h	140	0	936	0	94	0	1782	1610	0	2	508	527
V/C Ratio(X)	0.11	0.00	0.63	0.00	0.00	0.00	0.31	0.24	0.00	0.00	0.62	0.62
Avail Cap(c_a), veh/h	288	0	1097	0	290	0	1782	1610	0	69	508	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.95	0.95	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	0.0	13.5	0.0	0.0	0.0	2.0	0.0	0.0	0.0	32.5	32.6
Incr Delay (d2), s/veh	0.4	0.0	0.9	0.0	0.0	0.0	0.1	0.3	0.0	0.0	5.6	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	8.6	0.0	0.0	0.0	0.5	0.2	0.0	0.0	7.6	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	0.0	14.4	0.0	0.0	0.0	2.1	0.3	0.0	0.0	38.1	38.0
LnGrp LOS	D	A	B	A	A	A	A	A	A	A	D	D
Approach Vol, veh/h		606			0			935			641	
Approach Delay, s/veh		15.3			0.0			1.3			38.0	
Approach LOS		B						A			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	95.8		9.2	61.8	34.0		9.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	73.0		16.0	47.0	30.0		16.0				
Max Q Clear Time (g_c+I1), s	0.0	2.0		3.1	4.0	18.1		0.0				
Green Ext Time (p_c), s	0.0	2.6		2.1	2.1	3.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			16.0									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
3: Boones Ferry Road & 95th Avenue

Wilsonville Delta Logistics TIA
Existing PM + Stage II + Project



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	3	796	28	15	6	475	749	8	1	1044	166
Future Volume (veh/h)	150	3	796	28	15	6	475	749	8	1	1044	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.96	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1900	1841	1900	1900	1900	1693	1781	1900	1900	1856	1781
Adj Flow Rate, veh/h	156	3	798	29	16	1	495	780	7	1	1088	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	7	0	4	0	0	0	14	8	0	0	3	8
Cap, veh/h	306	5	1210	115	317	20	839	2029	18	158	1444	
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.54	1.00	1.00	0.09	0.41	0.00
Sat Flow, veh/h	1326	25	2638	689	1765	110	3127	3437	31	1810	3526	1510
Grp Volume(v), veh/h	159	0	798	29	0	17	495	384	403	1	1088	0
Grp Sat Flow(s),veh/h/ln	1351	0	1319	689	0	1875	1564	1692	1775	1810	1763	1510
Q Serve(g_s), s	11.1	0.0	0.0	4.3	0.0	0.8	11.3	0.0	0.0	0.1	27.7	0.0
Cycle Q Clear(g_c), s	11.8	0.0	0.0	16.1	0.0	0.8	11.3	0.0	0.0	0.1	27.7	0.0
Prop In Lane	0.98		1.00	1.00		0.06	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	310	0	1210	115	0	337	839	999	1048	158	1444	
V/C Ratio(X)	0.51	0.00	0.66	0.25	0.00	0.05	0.59	0.38	0.38	0.01	0.75	
Avail Cap(c_a), veh/h	380	0	1339	148	0	429	839	999	1048	158	1444	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.70	0.70	0.70	0.76	0.76	0.00
Uniform Delay (d), s/veh	40.6	0.0	22.6	47.7	0.0	35.7	20.4	0.0	0.0	43.8	26.5	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.9	0.9	0.0	0.0	0.8	0.8	0.7	0.0	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	7.3	0.8	0.0	0.4	3.3	0.2	0.2	0.0	11.7	0.0
Unsig. Movement Delay, s/veh												15.50
LnGrp Delay(d),s/veh	41.5	0.0	23.5	48.6	0.0	35.7	21.2	0.8	0.7	43.8	29.3	15.5
LnGrp LOS	D	A	C	D	A	D	C	A	A	D	C	B
Approach Vol, veh/h		957			46			1282			1188	A
Approach Delay, s/veh		26.5			43.8			8.7			28.2	
Approach LOS		C			D			A			C	

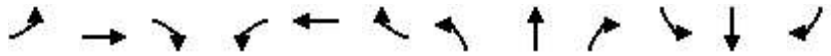
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.2	48.0		23.8	14.2	67.0		23.8
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	23.0	43.0		24.0	4.0	62.0		24.0
Max Q Clear Time (g_c+I1), s	13.3	29.7		18.1	2.1	2.0		13.8
Green Ext Time (p_c), s	1.7	4.7		0.1	0.0	9.0		3.1

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary — Wilsonville Delta Logistics TIA
4: I-5 SB On Ramp/I-5 SB Off Ramp & Boones Ferry Road/Elligsen Rd — Existing PM + Stage II + Project



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱				↰	↰	↱
Traffic Volume (veh/h)	0	1024	844	0	645	317	0	0	0	416	52	587
Future Volume (veh/h)	0	1024	844	0	645	317	0	0	0	416	52	587
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1826	1841	0	1826	1870				1841	1856	1663
Adj Flow Rate, veh/h	0	1089	0	0	686	0				482	0	569
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	5	4	0	5	2				4	3	16
Cap, veh/h	0	1623		0	1623					1532	0	607
Arrive On Green	0.00	0.94	0.00	0.00	0.94	0.00				0.44	0.00	0.44
Sat Flow, veh/h	0	3561	1560	0	3561	1585				3506	0	1389
Grp Volume(v), veh/h	0	1089	0	0	686	0				482	0	569
Grp Sat Flow(s),veh/h/ln	0	1735	1560	0	1735	1585				1753	0	1389
Q Serve(g_s), s	0.0	5.7	0.0	0.0	2.2	0.0				9.4	0.0	41.0
Cycle Q Clear(g_c), s	0.0	5.7	0.0	0.0	2.2	0.0				9.4	0.0	41.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1623		0	1623					1532	0	607
V/C Ratio(X)	0.00	0.67		0.00	0.42					0.31	0.00	0.94
Avail Cap(c_a), veh/h	0	1623		0	1623					1803	0	715
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.65	0.00	0.00	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.0	0.0	0.0	1.9	0.0				19.3	0.0	28.2
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.0	0.8	0.0				0.1	0.0	17.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.2	0.0	0.0	0.7	0.0				3.6	0.0	15.4
Unsig. Movement Delay, s/veh			1.20			0.30						
LnGrp Delay(d),s/veh	0.0	3.4	1.2	0.0	2.6	0.3				19.4	0.0	45.8
LnGrp LOS	A	A	A	A	A	A				B	A	D
Approach Vol, veh/h		1987	A		1023	A					1051	
Approach Delay, s/veh		2.4			1.9						33.7	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		54.1		50.9		54.1
Change Period (Y+Rc), s		5.0		5.0		5.0
Max Green Setting (Gmax), s		41.0		54.0		41.0
Max Q Clear Time (g_c+I1), s		7.7		43.0		4.2
Green Ext Time (p_c), s		10.2		2.9		5.7

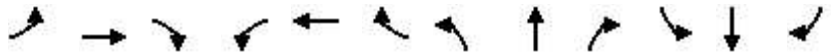
Intersection Summary		
HCM 6th Ctrl Delay		10.4
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.
Unsignalized Delay for [EBR, WBR] is included in calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
5: I-5 NB Off-Ramp/I-5 NB On-Ramp & Elligsen Rd

Wilsonville Delta Logistics TIA
Existing PM + Stage II + Project



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱	↰↰		↱			
Traffic Volume (veh/h)	0	756	684	0	659	508	303	0	234	0	0	0
Future Volume (veh/h)	0	756	684	0	659	508	303	0	234	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1856	1811	0	1870	1870	1811	0	1841			
Adj Flow Rate, veh/h	0	804	0	0	701	0	322	0	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	3	6	0	2	2	6	0	4			
Cap, veh/h	0	2778		0	2800		407	0				
Arrive On Green	0.00	1.00	0.00	0.00	0.79	0.00	0.12	0.00	0.00			
Sat Flow, veh/h	0	3618	1535	0	3647	1585	3346	0	1560			
Grp Volume(v), veh/h	0	804	0	0	701	0	322	0	0			
Grp Sat Flow(s),veh/h/ln	0	1763	1535	0	1777	1585	1673	0	1560			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	5.5	0.0	9.8	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	5.5	0.0	9.8	0.0	0.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2778		0	2800		407	0				
V/C Ratio(X)	0.00	0.29		0.00	0.25		0.79	0.00				
Avail Cap(c_a), veh/h	0	2778		0	2800		1259	0				
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.63	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	2.9	0.0	44.8	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.2	0.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	1.4	0.0	4.1	0.0	0.0			
Unsig. Movement Delay, s/veh			0.80			0.60			42.30			
LnGrp Delay(d),s/veh	0.0	0.2	0.8	0.0	3.2	0.6	47.0	0.0	42.3			
LnGrp LOS	A	A	A	A	A	A	D	A	D			
Approach Vol, veh/h		1532	A		1241	A		437	A			
Approach Delay, s/veh		0.5			2.0			45.7				
Approach LOS		A			A			D				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		87.7				87.7		17.3				
Change Period (Y+Rc), s		5.0				5.0		4.5				
Max Green Setting (Gmax), s		56.0				56.0		39.5				
Max Q Clear Time (g_c+I1), s		2.0				7.5		11.8				
Green Ext Time (p_c), s		7.2				5.9		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			7.2									
HCM 6th LOS			A									

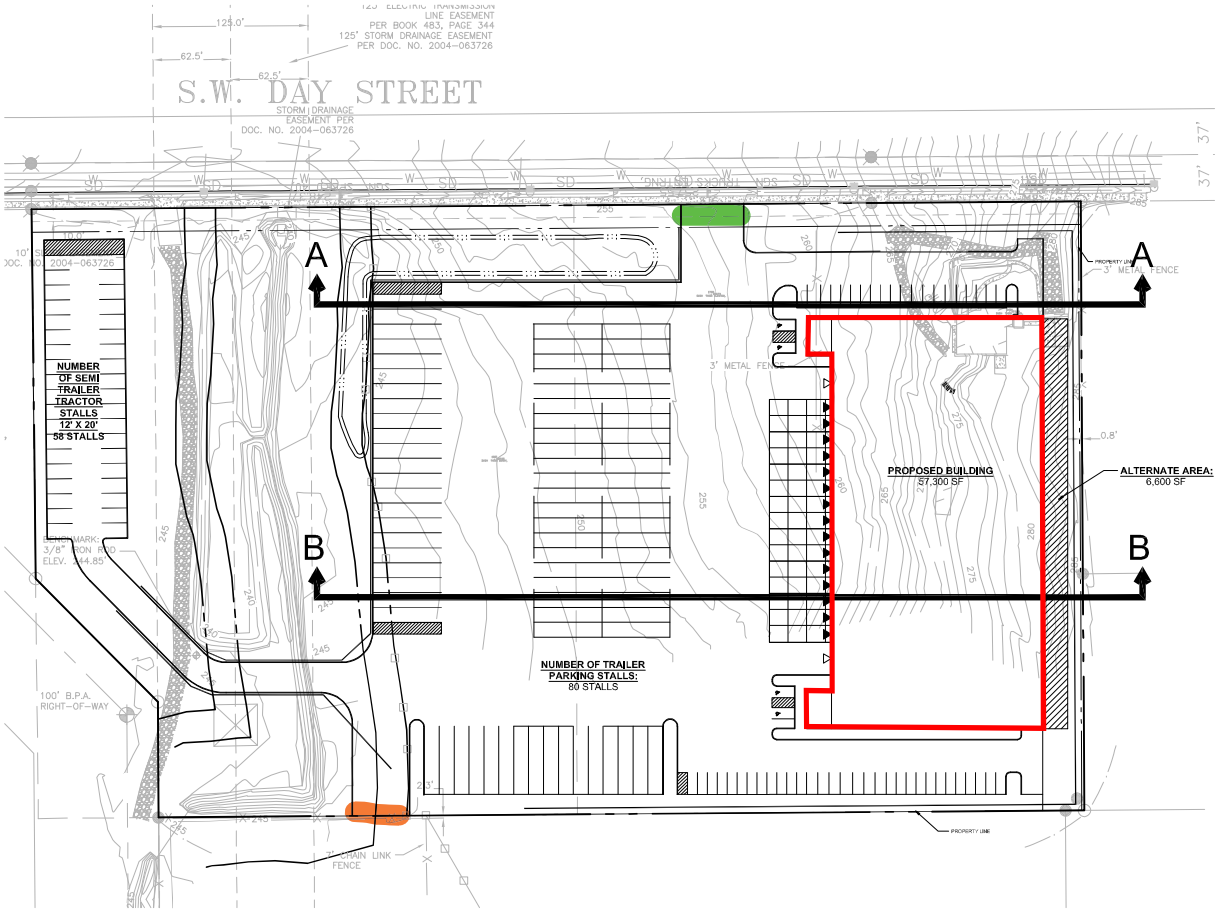
Notes

Unsignalized Delay for [NBR, EBR, WBR] is included in calculations of the approach delay and intersection delay.

ID	Software/Method	Intersection	Control Type	LOS	Delay	V/C Ratio
2	Synchro HCM 6th Signal	Boones Ferry Road & Day Rd	Signal	B	16	0.67
3	Synchro HCM 6th Signal	Boones Ferry Road & 95th Avenue	Signal	C	21	0.71
4	Synchro HCM 6th Signal	I-5 SB On Ramp/I-5 SB Off Ramp & Boon	Signal	B	10	0.79
5	Synchro HCM 6th Signal	I-5 NB Off-Ramp/I-5 NB On-Ramp & Ellig	Signal	A	7	0.35

APPENDIX G

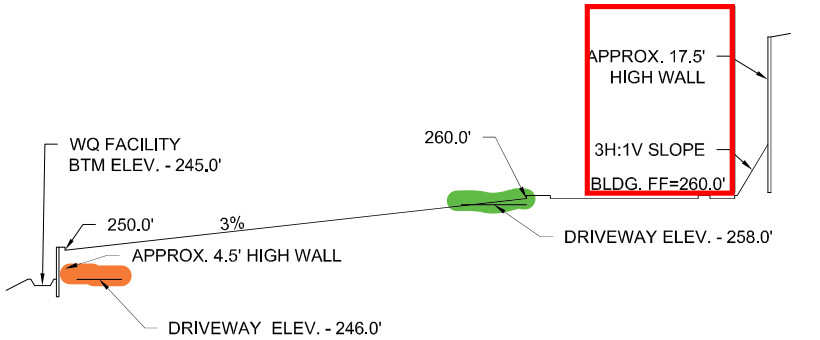
SITE PLAN



SITE PLAN - SCALE =1"-100'

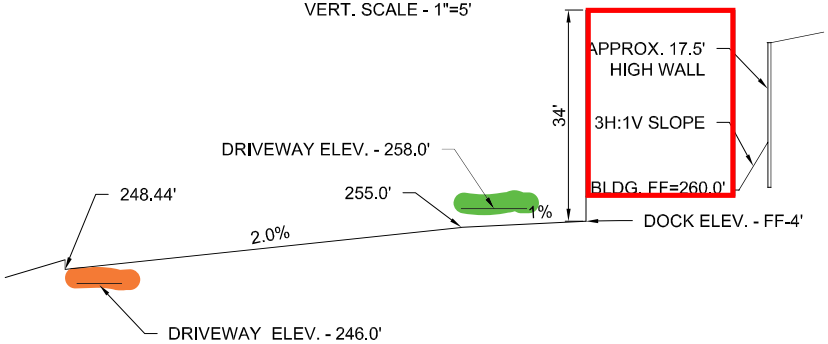
100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.



SECTION A-A

HORIZ. SCALE - 1"=100'
VERT. SCALE - 1"=5'



SECTION B-B

HORIZ. SCALE - 1"=100'
VERT. SCALE - 1"=5'

SITE DATA TABLE

DOCK DOORS	15
DRIVE UP DOORS	2
TRAILER STALLS	80
SEMI TRAILER TRACTOR STALLS	38
PARKING STALLS	56 TOTAL
ACCESSIBLE	4
BUILDING AREA	57,300 SF
ADDITIONAL AREA	6,600 SF

Lee D. Leighton

From: Pepper, Amy <apepper@ci.wilsonville.or.us>
Sent: Friday, June 10, 2022 5:11 PM
To: Lee D. Leighton; Bradford, Philip
Cc: Scott Moore; Adam Goldberg; Igor Nichiporchik; Vlad Tkach; Janet T. Jones; Breezy Rinehart-Young; Greg Mino
Subject: RE: Delta Logistics (DB22-0007 et al) - Building SF increase and TIA

Lee ~

I consulted with DKS. The proposed change results in approximately 5 additional PM peak trips. The intersections have adequate capacity and a new TIA is not needed.

Have a great weekend!

Amy

From: Lee D. Leighton <LLeighton@mcknze.com>
Sent: Tuesday, June 7, 2022 1:54 PM
To: Pepper, Amy <apepper@ci.wilsonville.or.us>; Bradford, Philip <pbradford@ci.wilsonville.or.us>
Cc: Scott Moore <SMoore@mcknze.com>; Adam Goldberg <AGoldberg@mcknze.com>; Igor Nichiporchik <igor@deltagov.com>; Vlad Tkach <vlad@deltagov.com>; Janet T. Jones <JTJ@mcknze.com>; Breezy Rinehart-Young <BRinehart@mcknze.com>; Greg Mino <GMino@mcknze.com>
Subject: Delta Logistics (DB22-0007 et al) - Building SF increase and TIA

Hi Amy, Hi Philip:

We are currently in the process of responding to guidance from City staff in the notice of incomplete application for the Delta Logistics Annex project on SW Day Road (DB22-0007 et al).

In that context, it has come to our attention that the TIA prepared by DIKS used an assumed building size of 56,100 SF, but two changes have occurred that affect the building size figure:

1. The submitted plans include a building that is 2,016 SF larger, at 58,116 SF, and
2. The owner has asked us to design two interior mezzanine structures as possible future expansions.

As a result, we anticipate that this ultimate configuration will be in our revised land use submittal:

Proposed building SF:		58,116 SF (of which NW Office is 2,437 SF and SW Office is 2,037 SF)
Additional Mezzanines:	NW	2,196 SF
	SW	1,833 SF
Revised Total Building SF:		**62,145 SF**

The resulting SF figure represents a 10.8% increase in the building's proposed overall floor area relative to the anticipated building area in the TIA. We think it makes sense to ask DKS to comment on whether this change will affect the conclusions of their February 2022 TIA for the project. Based on the results of their Table 5: Future Intersection Operations, we think it unlikely that any study intersection's performance will be significantly affected by the change:

FUTURE INTERSECTION OPERATIONS

An analysis of the future intersection operations was performed at the study intersections for each future scenario. Intersection operations were analyzed for the PM peak hour using Highway Capacity Manual (HCM) 6th Edition methodology.[9] The volume to capacity (v/c) ratio, delay, and level of service (LOS) of each study intersection are listed in Table 5.

TABLE 5: FUTURE INTERSECTION OPERATIONS

INTERSECTION	OPERATING STANDARD/ MOBILITY TARGET	EXISTING + PROJECT			EXISTING + STAGE II			EXISTING + STAGE II + PROJECT		
		V/C	DELAY	LOS	V/C	DELAY	LOS	V/C	DELAY	LOS
SIGNALIZED										
BOONES FERRY RD/ DAY RD	LOS D (City)	0.66	16.0	B	0.66	15.8	B	0.67	16.0	B
BOONES FERRY RD/ 95TH AVE	LOS D (City)	0.70	20.4	C	0.71	20.6	C	0.71	20.7	C
I-5 SOUTHBOUND RAMPS/ ELLIGSEN RD	v/c ≤ 0.99 (ODOT)	0.76	9.6	A	0.79	10.3	B	0.79	10.4	B
I-5 NORTHBOUND RAMPS/ ELLIGSEN RD	v/c ≤ 0.99 (ODOT)	0.33	7.2	A	0.35	7.2	A	0.35	7.2	A
TWO-WAY STOP- CONTROLLED										
SITE ACCESS/ DAY RD	LOS D (City)	0.06	14.5	A/B	-	-	-	0.06	14.5	A/B

SIGNALIZED INTERSECTION:
Delay = Average Intersection Delay (secs)
v/c = Total Volume-to-Capacity Ratio
LOS = Total Level of Service

TWO-WAY STOP CONTROLLED INTERSECTION:
Delay = Critical Movement Delay (secs)
v/c = Critical Movement Volume-to-Capacity Ratio
LOS = Critical Levels of Service (Major/Minor Road)

As shown, all study intersections are expected to meet the City's operating standard under all future analysis scenarios. HCM reports are provided in the appendix.

(DKS TIA report at p. 14)

Please consider and reply to let us know what action is needed to take note of this change.

Thank you,

~Lee

Lee Leighton, AICP | he/him/his
Land Use Planning
D 971.346.3727 E lleighton@mcknze.com

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LAND USE AND TRANSPORTATION PLANNING ▪ LANDSCAPE ARCHITECTURE

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From: Adam Goldberg <AGoldberg@mcknze.com>
Sent: Wednesday, June 1, 2022 9:43 AM
To: Lee D. Leighton <LLeighton@mcknze.com>
Cc: Scott Moore <SMoore@mcknze.com>
Subject: Office Areas - Delta Logistics Wilsonville

Lee,

Below are the areas for current and future office build-outs for Delta:

- NW Office: 2,437sf
- NW Mezzanine: 2,196sf
- Future SW Office: 2,037sf
- Future SW Mezzanine: 1,833sf
- **Total Office Area: 8,503sf**

Let me know if you need anything else for this matter.

Thanks,

Adam Goldberg
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Berm
SW Boones Ferry Rd
Brown Contracting
141
SW Day Rd
SW Day Rd
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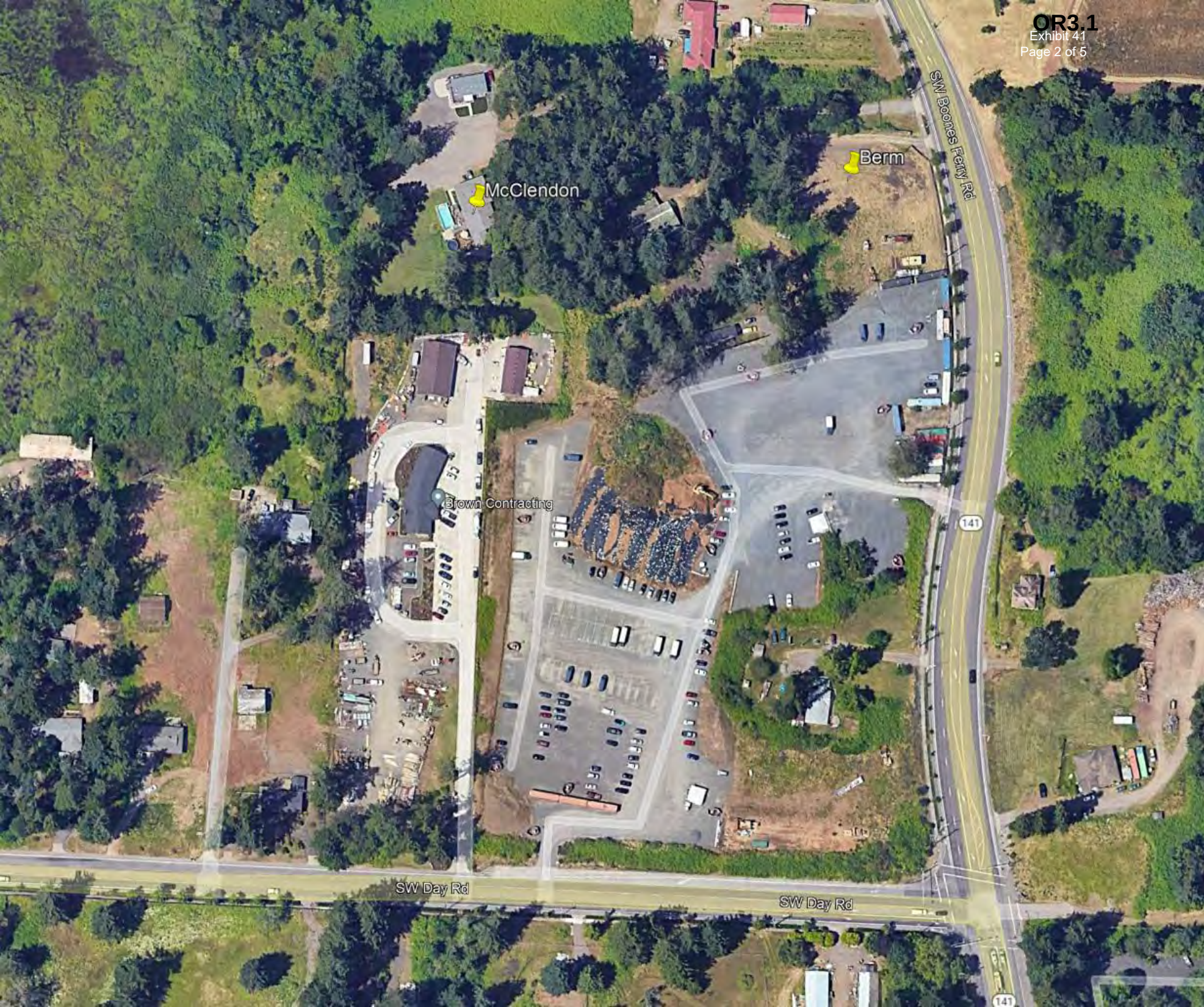
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